

AN ASSESSMENT OF THE RELATIONSHIP BETWEEN SOCIAL INTEGRATION
VARIABLES AND COMMUNITY COLLEGE STUDENT RETENTION

BY

MICHAEL G. ROM

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DEDICATION

To my parents Jean and George Rom,
Who taught me to accept challenges and conquer fear;

To my son David who had to play ball by himself,
Because I was not there;

To my daughter Michele who because of my absence,
Fell asleep while shedding a tear;

To my ever loving wife Lucile,
Who was both mother and father when I was not near;

To my God who when things appeared the darkest,
Gave me strength to see things clear;

This dissertation is dedicated in your honor.

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Abstract of Dissertation Presented to the Graduate
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By

MICHAEL G. ROM

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Using Tinto's conceptual framework model, the purpose of this study was to determine what relationships existed between social system integration variables (peer-group and faculty-student interaction) and student dropout decisions in a two-year community college. Two hundred students, at Pasco Hernando Community College, were surveyed during the Fall term of 1984, using a Student Survey Questionnaire. One hundred fifty-two usable responses were received for a 76 percent return rate. The instrument measured the student's background characteristics, commitment (goal and institutional), academic integration, social integration (peer-group and faculty-student

interaction), and perceived dropout decision. In addition, other demographic variables were requested via this questionnaire.

Four different population groups were considered; the total student population, students attending the East, the North, and the West campuses. Each of the 19 hypotheses was tested using the four different population groups. Hypotheses 2 and 3, which related peer-group and faculty-student interaction to the actual dropout decision, showed significance at the .05 level for the East and North campuses.

For East Campus students a significant proportion of the variation in dropout decisions (11.2%) was explained by the peer-group interaction variable (negative influence) and the faculty-student interaction variable (8.6%), which was a positive influence. For North Campus students a significant proportion of the variation in dropout decisions (10.9%) was explained by the peer-group interaction variable (positive influence) and the faculty-student interaction variable (16.7%), which was a negative influence.

Of the remaining 15 hypotheses relating age, sex, race, accumulated semester hours, and a human relations type course with the social integration, peer-group interaction, and faculty-student interaction variables, six were found to have statistically significant relationships at the .05 level.

The study showed that similarities between campus populations were greater than the differences. The two main

exceptions were peer-group and faculty-student interaction. The variable relationships in Tinto's model did not appear to apply evenly to this commuter school. When commuter populations have characteristics in common with residential schools, then Tinto's model of the dropout process may be more applicable than recent research indicated.

CHAPTER ONE

INTRODUCTION

Substantial time and interest have been dedicated to college student attrition as is represented in the work of by Spady (1970); Cope and Hannah (1975); Tinto (1975); Pantages and Creedon (1978); and Lenning, Sauer, and Beal (1980). Despite all the research, community college attrition rates have remained high and virtually unchanged.

A national survey conducted in the spring of 1979 by the American College Testing (ACT) Program and the National Center for Higher Education Management Systems verified this consistency in attrition rates (Beal & Noel, 1979). Retention after one year in two-year public institutions was 55 percent in 1975-76, 55 percent in 1976-77, and 53 percent in 1977-78 as reported by 74, 82, and 92 two-year institutions respectively. More recent statistics also confirmed a 50 percent dropout rate in postsecondary schools (Grant & Eiden, 1982).

Prior to the 1970's, much of the research on attrition was atheoretical, identifying a variety of associations among various student and institutional characteristics and attrition, but lacked a theoretical base by which attrition could be studied. Tinto (1975) attempted to bring some coherence to this research as well as provide a conceptual framework to guide future research. Tinto expanded Spady's (1970) work on student

attrition by developing a predictive, explanatory model of the dropout process which has at its core the concepts of student academic and social integration into the institution.

Tinto (1975), in his article "Dropout from Higher Education: A Theoretical Synthesis of Recent Research," drew upon Durkeim's (1961) theory on suicide which essentially theorizes that suicide is more likely to occur when individuals are insufficiently integrated into the fabric of society. Spady (1970) first applied Durkeim's theory to college student dropouts by suggesting that a college is a social system with its own values and belief system.

Tinto (1975) further suggested that social conditions affecting dropouts from college would be similar to those social conditions resulting in suicide in society as a whole. Specifically, he stated:

Insufficient interaction with others in the college and insufficient congruency with the prevailing value patterns of the college collectively . . . will lead to low commitment to that social system and will increase the probability that individuals will decide to leave college and pursue alternative activities. (p.92)

The model Tinto developed to depict his theory on college dropout decisions emphasized two main areas of integration: the academic and social systems (see Figure 1 on p.3). These areas of integration have been verified as causes of college dropouts and as explanations for college student persistence (Bayer, 1968; Denzin, 1966; Medsker & Trent, 1968; Rootman, 1972; Scott, 1976; Spady, 1971).

Tinto states that social integration occurs primarily through informal peer-group associations, semi-formal extra-curricular activities, and interaction with faculty and administration within the college. Tinto's theoretical model implies that successful social integration, via the above means, results in increased retention of students in an educational institution. Tinto stated:

Successful encounters in these areas result in varying degrees of social communication, friendship support, faculty support, and collection affiliation, each of which can be viewed as important social rewards that become part of the person's generalized evaluation of the cost and benefits of the college attendance and that modify his educational and institutional commitments. Other things being equal, social intergation should increase the likelihood that the person will remain in college. (p. 107)

Pascarella and Chapman (1983), using 2,326 freshmen from 11 postsecondary institutions, and Pascarella and Terenzini (1983), using a longitudinal study with three data collections and a sample of 763 freshmen, verified the direct influence of social integration on college dropouts as theorized by Tinto. These studies were conducted in four-year residential schools. However when Tinto's model was applied to both four and two-year commuter schools, the results were non-supportive (Pascarella & Chapman, 1983; Pascarella, Duby, & Iverson, 1983). Pascarella and Chapman (1983) found no direct nor indirect effects of social integration on persistence in four or two-year commuter institutions. In addition, Pascarella, Duby, and Iverson (1983), using 269 incoming freshmen, reported a negative direct effect of social

integration on persistence in a commuter school. This negative effect was also reported in a residential school by Terenzini, Pascarella, Theophilides, and Lorang (1983).

Even though social integration variables have been shown to affect dropout decisions in particular institutions, the application of Tinto's model across all institutional types is still problematic. Further research is needed to verify the influence of social integration variables, specifically peer-group and faculty-student interaction, on college student persistence as it relates to different types of postsecondary institutional settings.

Tinto's Model

In the theoretical model of dropout decisions in college diagrammed in Figure 1, Tinto suggests

the process of dropout from college can be viewed as a longitudinal process of interactions between the individual and the academic and social systems of the college during which a person's experiences in those systems (as measured by his normative and structural integration) continually modify his goal and institutional commitments in ways which lead to persistence and/or to varying forms of dropout. (p. 94)

Individuals enter institutions of higher education with background characteristics, pre-college experiences, a variety of individual attributes, and family backgrounds, each of which has a possible direct and/or indirect impact upon their performance in college. In addition, these background characteristics and individual attributes also influence the development of the

educational expectations (goal commitments) and commitments the individual brings into the college environment (institutional commitments). These goals and institutional commitments serve both as predictors and reflections of the person's successes and failures in the collegiate setting.

Tinto's model further suggests that if background characteristics and commitments are given, then the individual's integration into the academic and social systems of the college is the factor that most directly affects the student's continuance in that college. Tinto (1975) states, "Given prior levels of goal and institutional commitment, it is the person's normative and structural integration into the academic and social systems that lead to new levels of commitment" (p. 96).

According to Tinto's model, other things being equal, the higher the degree of integration of the individual into the college system, the greater will be the student's commitment to the goal of college completion. Through the model Tinto implies that if preceding variables can be held constant, such as prior college characteristics and/or experiences and commitment, then academic and social integration will contribute to the persistence of a student in college. According to Tinto, if academic system variables could be controlled for, then social system variables, specifically peer-group interaction and faculty-interaction, would contribute to and explain the persistence of a student in college.

There is adequate research to justify Tinto's inclusion of social systems into his model of retention. Peer-interaction has been shown to be an important variable in a student's decision to stay in college (Denzin, 1966; Pancos & Astin, 1968; Slocum, 1956; Spady, 1970). Spady (1971) used a sample of 683 students who entered the University of Chicago as freshmen in September 1965 to study interpersonal relations. He concluded that interpersonal relationships accounted for over 12 percent of the explained variance in social integration for the men and nearly 20 percent for the women.

The quantity and/or quality of faculty interaction has been demonstrated as an important variable in the retention of students in colleges (Centra & Rock, 1971; Cesa, 1980; Noel, 1976; Pascarella & Terenzini, 1976; Spady, 1971). Pascarella and Terenzini (1977) used a sample of 536 students at Syracuse University, to test Tinto's theoretical model of attrition. Under discriminant analysis, Pascarella and Terenzini concluded that informal student-faculty contact is a significant predictor of college persistence with significant F-ratios being found on three of the six faculty interaction categories.

Other things being equal, the greater the college student's level of social and academic integration, the greater his or her subsequent commitment to the institution and commitment to the goal of college graduation, respectively. These subsequent

commitments, in turn, are seen, along with levels of integration, as having a positive influence on persistence.

As suggested by Tinto's model, the student's social system is an important part of the process that leads toward an individual's decision to persist or dropout of college. According to research, peer-group interaction and faculty-student interaction have a unique contribution to student social systems and student retention, but this may not apply across all institutional types. Additional research needs to concentrate on the influence of social system variables, such as peer-group and faculty-student interaction, on college student dropout in both residential and commuter institutions.

In order to determine the influence of social system variables on the dropout decision, all other preceding and related variables such as family background, individual attributes, pre-college schooling, commitments, and academic system need to be held constant. If this is not done, then one cannot assume that social system variables alone contribute to the student's decision to either leave school or remain.

This dissertation controlled for those variables in Tinto's model, background characteristics, commitments and academic system, while investigating the relationship between social system variables and college student retention in a two-year commuter community college.

Statement of the Problem

A problem facing community colleges today is high student attrition or drop out rates. There is a need to investigate what variables relate to community college student attrition in order to better understand and prevent the dropout process.

Using Tinto's (1975) conceptual framework, the purpose of this study was to determine what relationships exist between social system integration variables (peer-group interaction and faculty-student interaction) and students dropout decisions in a two-year community college. The researcher hoped that the results of this study would then be used by community colleges to develop new programs designed to reduce student attrition and subsequently enhance support for these colleges.

Hypotheses

The following null hypotheses were tested (alpha level .05):

Hypothesis 1. A significant proportion of the variation in student dropout rates is not explained by selected social system variables after controlling for student background characteristics, student commitments, and the student academic system (student grade performance and student intellectual development).

Hypothesis 2. A significant proportion of the variation in student dropout rates is not explained by peer-group interaction after controlling for student background characteristics, student commitments, the academic system, and faculty-student interaction.

Hypothesis 3. A significant proportion of the variation in student dropout rates is not explained by faculty-student interaction after controlling for student background characteristics, student commitments, the academic system, and peer-group interaction.

Hypothesis 4. There is no interaction effect between peer-group interaction and faculty-student interaction.

Hypothesis 5. There is no significant difference between white and non-white student population measurements on the social system variable.

Hypothesis 6. There is no significant difference between white and non-white student population measurements on the peer-group interaction variable.

Hypothesis 7. There is no significant difference between white and non-white student population measurements on the faculty-student interaction variable.

Hypothesis 8. There is no significant difference between male and female student measurements on the social system variable.

Hypothesis 9. There is no significant difference between male and female student measurements on the peer-group interaction variable.

Hypothesis 10. There is no significant difference between male and female student measurements on the faculty-student interaction variable.

Hypothesis 11. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the social system variables.

Hypothesis 12. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the peer-group interaction variable.

Hypothesis 13. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the faculty-student interaction variable.

Hypothesis 14. There is no correlation between student semester hours completed and the social system variable.

Hypothesis 15. There is no correlation between student semester hours completed and the peer-group interaction variable.

Hypothesis 16. There is no correlation between student semester hours completed and the faculty-student interaction variable.

Hypothesis 17. There is no correlation between student age and the social system variable.

Hypothesis 18. There is no correlation between student age and the peer-group interaction variable.

Hypothesis 19. There is no correlation between student age and the faculty-student interaction variable.

Assumptions

The assumptions for this study were as follows:

1. The testing of some of the hypotheses relied on self-reported data. Systematic error caused by method bias, therefore, may have affected any relationships that have been confirmed or questioned. However, there was evidence that suggested that one's perception of social integration most directly relates to college persistence (Pervin, Reik, & Dalrymple, 1966; Rootman, 1972; Spady, 1971). This research was relevant since the responses on the instrument used in this study were based on the student's perception.

2. It was assumed the dropout rate for Associate of Arts and Associate of Science degree seeking students would be approximately 30 percent.

3. Decisions to remain in school or drop out are tentative decisions and therefore conclusions derived from such data should be considered in the same reference.

Delimitations

This study was confined to the student population of Pasco Hernando Community College, a tri-campus college located in Dade City, Brooksville, and New Port Richey, Florida.

Limitations

1. The ex post facto design of the study and the fact that questionnaires were administered only once precluded advantages inherent in experimental designs. The researcher was not able to

control all extraneous variables and to manipulate independent variables.

2. The results of the study were interpreted within the limitations imposed by the validity and reliability of the survey instrument used in the investigation and the decisions made concerning which items to include in the constructed scale scores for each variable.

3. The generalizability of the findings was limited because the subjects were not selected randomly from the total population of two-year college students. They were randomly selected from within the population of degree seeking students enrolled at Pasco-Hernando Community College for the Fall term of 1984. Even though Pasco-Hernando Community College students were felt to be representative of other community college students, further empirical study must determine the extent to which the findings will be applicable in other two-year colleges or other educational institutions.

4. Subjects were limited to students who had declared programs on the Pasco-Hernando Community College Program Declaration form (see Appendix A), of either an Associate of Arts or Associate of Science degree. This assured at least a minimum commitment to a college education by the students. This eliminated students from the sample who declared undecided, certificate program, vocational certificate program, or personal

objectives as their anticipated goal. By eliminating these four groups, potential dropouts would not be eligible for the sample, and therefore would limit the generalizability of the findings.

5. The dropout rate for degree seeking students in this study was approximately 15 percent. This low dropout rate plus the small sample size from each individual campus may limit the validity of some of the statistical analysis.

6. Because of the large number of tests of hypotheses (92) it might be expected, due to the error rate, that at least one hypothesis might be found statistically significant in reference to any given campus.

Significance of the Study

Academic failures are generally accepted as a category of dropouts from educational institutions. There is a second category of students, although academically capable, who lack forms of personal and/or social qualities that prevent them from becoming properly integrated into the college social environment. Noel (1976), reporting on the findings of a national seminar on retention, stated that the seminar group realized the need to study the interaction between students and their institutional environment. The University of California, Los Angeles, Academic Advancement Program has also identified difficulty in adjusting to campus life as one of the central areas of students' problems (Moore, 1976). Edwards and Waters (1983) also suggested that lack of satisfaction with the non-academic part of college could contribute to students dropping out.

More could be done in two-year colleges toward both redirecting non-persisters and increasing important recruitment markets for student enrollment. There exists a great need in community colleges to service all students who enter. Student retention should not be promoted to the extent that students see leaving community college as a failure. Students should feel comfortable to come and go as they please (Hahn, 1974). There is a need, however, to provide structured programs to assure that potentials are realized by both students and the institution. Students should be given every opportunity to become socially and academically integrated into an existing college environment.

Programs presently exist that attempt to improve on those personal and social qualities that are advantageous for social integration into the college environment. Meyer (1975) concluded the following concerning the impact of a human development course on community college students: (a) a human development course can have a significantly positive impact on college students' self-esteem, definiteness about self, and sense of purpose and meaning in life; (b) participation in a human development course can significantly strengthen students' interpersonal feelings, particularly feelings toward others; and (c) the human development course is strongly endorsed by participants as being personally relevant and meaningful. Similar findings supporting a human relations-type course by actual participants were reported

by Wall (1979). Recent evidence of programs designed to improve retention through improving the degree of social integration has been cited by Beck (1980).

In light of the expressed need to retain students, and considering the importance of student retention to the sustenance of institutional vitality, the investigation of Tinto's theoretical model of retention, specifically, social system integration (peer-group and faculty-student interaction) and how it related to dropout decisions in a two-year commuter institution seemed appropriate. This study contains a description of the contributions made by peer-group interaction and/or faculty-student interaction variables toward the process of dropout decisions described by Tinto (1975). Information provided by this research should encourage educational institutions to investigate whether single retention models are applicable to any one institutional type or if a combination of theoretical models might be more advantageous.

Definition of Terms

The following definitions were cited from Tinto (1975). A complete operational definition of each term is provided in Chapter 3.

Academic integration. Meeting certain explicit standards of the academic system (grade performance) and identification with the norms of the academic system (intellectual development).

Academic system. The combined effects of grade performance and intellectual development on the student.

Actual dropout. Students who did not return the following term

Background characteristics. Extraneous variables characteristic of individual students, i.e., family background, individual attributes, and pre-college schooling.

Commitment. A degree of obligation to a goal or institution.

Dropout decision. The perceived intent of individuals' educational plans or the actual decisions to drop out of an institution.

Faculty-Student interaction. The degree to which students evaluate both the quantity and quality of their relationships with their instructors.

Family background. The highest level of formal education obtained by a student's parent or parents.

Goal commitment. The degree of commitment to complete a declared college program.

Grade performance (college). The grade point average (GPA) of a student's academic performance.

Individual attributes. Academic ability characteristics possessed by the student prior to entering college.

Institutional commitment. The educational expectations involving specific institutional components which predispose the student toward attending one institution rather than another.

Intellectual development. The self-perceived growth of a student in the areas of: general knowledge, reasoning skills, critical thinking skills, and appreciation of new ideas.

Peer-Group interaction. The degree to which a student perceives an institution as being receptive socially and the degree the student feels accepted by the institution. Also the degree to which a student feels other individuals demonstrate accepting behaviors and to what degree a student feels accepted by others.

Pre-College schooling. Characteristic of the school setting that students were exposed to prior to entering college.

Social system. The combined effects of peer-group interaction and faculty-student interaction on the students' integration into the social setting of an institution.

Social integration. The degree of social communication, friendship support, faculty support, and collective affiliation students perceive they possess in a social environment.

Organization of Remainder of the Research Report

The following chapters are utilized in the remainder of the research report. Chapter Two discusses dropouts in general and additional research and literature that were pertinent to the investigation. Chapter Three contains the procedures used to formulate the survey instrument, the pilot study, along with the complete methodology used in the study. Three campuses of a

multi-campus community college were surveyed. Multiple regression was used to analyze the main hypotheses of interest. The findings and analysis of data are presented in Chapter Four. Chapter Five includes a summary of the findings and the conclusions drawn as a result of the study, as well as implications for practices and further research.

CHAPTER TWO

REVIEW OF THE LITERATURE AND RELATED RESEARCH

Postsecondary institutions are facing a serious situation that has a number of important implications for institutions as well as students. Considering the economic times and the evolving demographics of student populations, there has been an increased interest in research studies concerning student retention. Until recently little attention has been directed to the underlying dynamics of the phenomenon of student withdrawal, rather the main emphasis has been atheoretical and descriptive.

A number of theoretical papers (e.g., Bean, 1981; Spady, 1970; Tinto, 1975) have developed conceptual models. These studies have made an important contribution to our understanding of dropout behavior in postsecondary institutions. These models provide both a comprehensive and an explanatory view of attrition which provides direction to researchers confronted with the problem of student dropout.

Tinto's (1975) schema has generated perhaps the most extensive body of research. Using the work of Spady (1970), Tinto has developed a longitudinal model which attempts to explain the persistence/withdrawal process in postsecondary education. This process is largely based on the degree of personal fit between the institutional environment and the

individual student. The concept of personal-institutional fit as an explanatory concept for student dropout has created much interest in postsecondary research (Aitken, 1982; Baumgart & Johnstone, 1977; Bean, 1981). It would follow then that the validity of Tinto's (1975) model has been the focus of recent research (Pascarella & Chapman, 1983; Pascarella, Duby, & Iverson, 1983; Pascarella & Terenzini, 1983; Terenzini, Pascarella, Theophilides, & Lorang, 1983).

Pascarella and Terenzini (1980) generally supported the predictive validity of the major dimensions of the Tinto model after sampling 763 students at Syracuse University. By adding five institutional integration scales to a discriminant analysis based on fourteen pre-college characteristics, freshman year academic performance, and extracurricular involvement, they were able to increase the correct identification of persisters and dropouts from 58.2 percent to 81.4 percent.

Additional support for Tinto's model was reported by Terenzini, Pascarella, Theophilides, and Lorang (1983) in which an earlier path analytic study (Pascarella & Terenzini, 1983) of the predictive validity of Tinto's theory of college student attrition was replicated. The study by Pascarella and Terenzini (1983) produced 24 significant paths in Tinto's model and Terenzini, Pascarella, Theophilides, and Lorang (1983) identified 22. Sixteen or 72.7 percent of these paths were common to the two studies. Both institutions were large, comprehensive,

research-oriented universities, with undergraduate enrollments of approximately 11,000. The first institution (Pascarella & Terenzini, 1983) was an independent residential, private institution and the other was a public residential institution.

Pascarella, Duby, and Iverson (1983) partially verified Tinto's model using a sample of 269 students from an urban, commuter university setting, rather than a residential setting. They suggested that when applied to a commuter institution sample not all dimensions of Tinto's model functioned according to expectations.

The validity of Tinto's model appears to be generally accepted, particularly in reference to residential settings. In addition, individual variables in Tinto's model appear to have predictive and explanatory power concerning dropout decisions. Despite this growing body of research on persistence/withdrawal behavior in colleges and universities, there lacks sufficient interest in two-year, community college commuter institutions. Thus a major purpose of this study was to assess the relationship between social integration variables and community college student retention using Tinto's (1975) conceptual framework.

Review of the Literature

Research in the past has generally come to the same conclusions concerning the particular characteristics of students who dropout from college. Dropouts generally (1) lack direction (Summerskill, 1962) and plans for the future (Pancos & Astin,

1968; Wessell, Engle, & Smidchens, 1978); (2) lack institutional commitment (Gottfredson, 1982; Hackman & Dysinger, 1970); (3) lack interpersonal orientation and friendship support to some degree (Astin, 1964a; Fiedler & Vance, 1981; Medsker & Trent, 1968; Spady, 1971; Yourgliche, 1966); (4) have less success in academic areas (Aitken, 1982; Baumgart & Johnstone, 1977; Slocum, 1956); (5) lack either insight and/or capacities for self-analytic, critical thinking or reject these processes as important parts of their personality (Daniel, 1963; Faunce, 1966); (6) lack acceptance of themselves to some degree (Lavin, 1965; Stevens, 1956); (7) are less conforming, flexible, or adaptable (Gurin, Newcomb, & Cope, 1968; Stern, Stern, & Bloom, 1956; Summerskill, 1962); and (8) possess fewer social skills that provide for positive social integration (Bourn, 1976; Spady, 1971; Tinto, 1975).

Of the many variables associated with attrition, two particularly stand out: social integration and academic integration (Spady, 1971; Tinto, 1975; Wider, 1981). The degree and the direction to which these variables affect college student retention varies. This variation is partially dependent on the type of institution under investigation (residential or commuter) and the uniqueness of the individual study (Pascarella & Chapman, 1983; Pascarella, Duby, & Iverson, 1983; Terenzini, Pascarella, Theophilides, & Lorang, 1983).

Validity of Tinto's Model in Residential Settings

Research findings related to Tinto's (1975) model by Pascarella and Terenzini (1983) concluded that persistence/withdrawal behavior is essentially the result of a longitudinal process of person-environment fit as theorized by Tinto. Specifically, background characteristics and institutional commitments explained little variance in persistence with reported R^2 increases of only .9 percent and 1.3 percent respectively. With alpha levels set at .01, significant R^2 increases occurred with the addition of the academic and social integration scales. Therefore, both academic integration and social integration had a direct influence on persistence.

Terenzini, Pascarella, Theophilides, and Lorang (1983) support the major constructs and their causal linkages in Tinto's model of college student attrition, with some noteworthy exceptions. In comparing their study of a public, residential school (study 2) with Pascarella and Terenzini's (1983) study of a private, residential school (study 1), the following differences were reported. In the second study the investigators found that a significant and direct path was lacking between students' level of academic integration, as was reported in the first study and college persistence. This direct path was present until subsequent institutional commitment was added to the model. It is suggested that this non-significant direct path may be artificial due to the fact that academic integration still has a strong indirect effect on persistence.

Another discrepancy reported by study 2 was that the direct path between social integration and persistence was marginally reliable ($p < .15$) and the influence was negative. This finding was in direct conflict with Tinto's theory and previous research. Possible speculative explanations were provided by the authors of study 2. They suggested excessive social involvement may reduce time spent studying, and withdrawal due to the student's recognition of poor academic performance was preferred over academic dismissal. The authors emphasized the fact that these were only speculations.

Study 2 confirmed findings in study 1 that indicated students' background characteristics had no direct effect on retention of students. Instead, background characteristics influence was dependent on the student's interaction with the institution and the student's experience in college.

Validity of Tinto's Model in Non-residential Setting

There is a growing body of research investigating the appropriateness of Tinto's model in relationship to non-residential schools. The research of Pascarella and Chapman (1983) compared the validity of Tinto's (1975) model of college withdrawal in three different types of institutions: four-year residential institutions, four-year commuter institutions, and two-year commuter institutions. The pooled analysis generally supported a number of Tinto's theoretical expectations, but there were variations between institutional setting types which were relative to this study.

The major difference between residential institution and commuter institution was the role played by academic and social integration variables. The residential sample reported academic integration having neither direct nor indirect effect on voluntary persistence. Social integration was found to have a significant direct effect on persistence. Conversely, in both the four-year and two-year commuter institutions, social integration had neither a direct nor indirect influence on student persistence. Academic integration indirectly influenced persistence through its direct effects on institutional commitment.

The pooled analysis of this study suggest that Tinto's model is potentially useful in predicting and explaining persistence/withdrawal behavior. Under separate analysis, results for different institutional settings may vary substantially.

Another study concerning the efficacy of the person-environment fit theory promoted by Tinto was conducted in a non-residential school by Pascarella, Duby, and Iverson (1983). Background characteristics were reported as having greater influence on persistence than social integration. This apparent influence was partially explained by the differences between residential and commuter institutions. Commuter students' environments were found to be generally less rich in terms of social integration opportunities than residential students'

settings and in addition the students enrolled in these institutions usually spent less time on campus (Chickering, 1974). From this research one could assume that the background characteristics which the commuter student brings to college might have a stronger direct impact on subsequent persistence than the background characteristics of residential students.

Additional findings showed that academic integration had a direct effect on persistence, a finding which was consistent with several previous studies conducted in residential schools (Bean, 1980; Munro, 1981; Pascarella & Terenzini, 1983; Terenzini & Pascarella, 1978). Social integration was found to have a negative influence on persistence. This was inconsistent with previous research in residential institutions (Pascarella & Terenzini, 1983; Pascarella & Chapman, 1983) but supported the findings of Terenzini, Pascarella, Theophilides, and Lorang (1983).

A possible explanation for this negative influence was given by the authors based on findings by Pascarella and Chapman (1983). They concluded that students with high levels of social integration tend to have high affiliation needs. Because of these needs, these students may be more sensitive to the limited opportunities for social integration satisfaction than their less socially integrated counterparts. This may increase the chance of the socially integrated student transferring to a residential school in order to fulfill these affiliation needs.

Another possible explanation for this negative influence of social integration is evidence suggested by Astin (1973) and Chickering (1974). They reported that commuter college students are a different population to begin with than residential college students. These initial differences may be a significant factor affecting the patterns of variables involved in the retention process across commuter and residential institutions.

If these explanations are feasible, then what is the possible flaw in Tinto's model that accounts for this negative influence. As Pascarella, Duby, and Iverson (1983) suggested, the flaw may not be in the model, but rather in the population to which it is applied. When Tinto's model is applied to residential schools, then Tinto's assumption that the institution provides ample opportunities for social integration applies. But when Tinto's model is applied to commuter school samples, the social integration component of the model may have an influence quite different from the initially hypothesized model.

Reconceptualization of Tinto's Model

The reported negative influence of social integration on persistence of college students (Pascarella, Duby, & Iverson, 1983; Terenzini, Pascarella, Theophilides, & Lorang, 1983) may have important implications in reference to the association between person-environment fit and college persistence. Possibly, this person-environment fit only influences persistence when institutions provide means for students to achieve social integration.

Pascarella, Duby, and Iverson (1983) have revised Tinto's model to better reflect their findings. Based on their research, a reconceptualization of Tinto's model was offered (Figure 2 p.30). This revised model was intended to provide more explanatory power in a non-residential institution.

The model assumes that the characteristics which students bring to college will not only influence their interactions with the college environment, but will also have important direct effects on persistence. In Tinto's original model, these characteristics were seen basically as determinants of students' integration with the academic and social systems rather than having any direct influence.

Even though social and academic integration were retained as major elements of the model, some revisions were made. Academic integration was hypothesized as having a direct influence on persistence and an indirect effect through its influence on goal commitment. This was consistent with Tinto's model. The direct effect of social integration was hypothesized to be either non-significant (suggested by Pascarella & Chapman, 1983) or negative. This departure of social intergrations' influence from Tinto's model was based on two assumptions. First, commuter schools generally provide fewer social integration opportunities than residential schools and second this fact may lead to a more complex relationship between social integration and persistence than originally hypothesized by Tinto.

This reconceptualization of Tinto's model for use in non-residential institutions needs to be tested across different samples. Only a partial description of the model was included so as not to imply a complete testing of its validity by the present research investigation. Both models were included to provide the reader with background information concerning existing research. This present study mainly investigated the influence of social integration on persistence in reference to Tinto's model. Results obtained may, in addition, provide further information that will enhance the promotion of the revised model of Pascarella, Duby, and Iverson (1983).

Variables

In order to relate Tinto's model of retention and corresponding literature to this investigation, it was necessary to isolate and document characteristics and/or measurements that most substantially represent the variables under consideration.

The following variables in Tinto's model of retention were investigated for research support: background characteristics (consisting of family background, individual attributes, and pre-college schooling), commitments (consisting of goal commitment and institutional commitment), academic system (consisting of grade performance and intellectual development), social system (consisting of peer-group interaction and faculty-student interaction), and dropout decisions. The following sections contain a review of the research in these areas.

Family background. The three most accepted characteristics of family background were (1) socioeconomic status, (2) parental education, and (3) quality of relationship.

Research has shown that the socioeconomic status of the family is inversely related to student dropout rates from college (Astin, 1964b; Brown, 1980; Pancos & Astin, 1968; Pascarella & Terenzini, 1983). Even when intelligence was held constant, children from lower status families exhibited higher rates of dropout than did children of higher status families (Sewell & Shah, 1967).

The educational status of the student's parents is another variable related to dropout from college. The higher the level of formal education by the parents the more likely the student will persist in college (Chase, 1970; Jaffe & Adams, 1970; Kowalski, 1982; Pascarella & Chapman, 1983; Pascarella, Duby & Iverson, 1983; Ramist, 1981; Spady, 1971; Terenzini, Pascarella, Theophilidles, & Lorang, 1983). Bennet and Bean (1983) found this particularly true for black students.

Additional research has indicated that the quality of relationships between parents and students is an important factor related to dropout rates from college. The quality of relationships not only includes the quality of communication within the family but the expectations that parents and/or family members have concerning the student's education (Bean, 1981). College persisters' home environments tend to be characterized by

more open democratic, supportive, and less conflicting relationships (Congdom, 1964; Trent & Ruyle, 1965; Willner, 1980). In addition, these parents expressed more interest and offered more advice concerning college experience than non-persisters' parents (Trent & Ruyle, 1965). Hackman and Dysinger (1970) also confirmed that the greater the parental expectations the more likely the student would remain in school. Slocum, in his 1956 study, received a positive response from 81 percent of college persisters and only 35 percent from the dropouts to the following question, "Do your parents want you to finish college?"

Individual attributes. There are many individual characteristics that could be correlated with dropout behavior, such as personality traits and attitudinal differences. These variables certainly should not be discredited concerning their possible influence. Two particular characteristics have received the most research support concerning their relationship to student persistence in college: grade point average (GPA) in high school and scores on a standardized test.

The grade point average in high school indicates the students' ability and serves as a measurement of their past success (Bean, 1982; Blanchfield, 1971; Chase, 1970; Coker, 1968; Hutchenson, 1980; Jaffe & Adams, 1970; Lavin, 1965; Pancos & Astin, 1968; Prather, 1982; Taylor & Hanson, 1979; Willner, 1980). Tinto (1975), Edwards and Waters (1982), and Pascarella

(1968) confirmed that GPA in high school is one of the best predictors of college persistence. Tinto (1975) also supported Astin's (1973) conclusion that measures of ability, as obtained on a standardized test, are a significant predictor of college persistence.

Pre-College schooling. Nelson (1972) suggested that the characteristics of the high school attended by students were important variables in determining the probability of a student either persisting in college or dropping out. Two variables confirmed as predictors of college persistence by Davis (1966), Nelson (1972), and St. John (1971) were the students' ability level and their social status composition in the school. These two variables not only appear to affect the individuals' perception of their own ability but also their expectations for future college education. Additional research by Pascarella and Chapman (1983) found students' percentile rank in high school and high school GPA to be consistent predictors of college persistence.

Institutional commitment. In researching the variables that may influence an individual's decision to remain in school or dropout, one would have to investigate to what extent an individual was committed to a particular institution (Pascarella & Chapman, 1983). A valid procedure would be to determine whether specific institutional components exist that would predispose a student toward attending one institution rather than another (Pascarella & Chapman; Spady, 1970; Tinto, 1975).

Goal commitment. There seems to be little doubt that lack of goals in life decreases our motivational drive; thus college persistence depends on degree of career goals (Day, 1982; Churchill & Iwai, 1981; Jacobs, Bringman & Friedman, 1982). Previous research supports this statement: Slocum (1956) emphasized the need for occupational plans; Summerskill (1962) reported students need direction; Astin (1964b) implied "What to study?" was the important question for college students; Wessell, Engle, and Smidchens (1978) cited the need for a clear purpose concerning educational persistence; Beck (1980) reported that an important factor related to college dropout is inadequate clarification; and Simpson, Baker, and Mellinger (1980) demonstrated that voluntary withdrawals had less commitment than persisters. Research reports that if students have some degree of direction they are more likely to persist in college.

Grade performance. Researchers reported that grade performance is an important variable in students' college success (Avakian, MacKinney, & Allen, 1982; Bean, 1982; Edwards & Waters, 1983). Spady (1970) reported that grades are the single most important factor related to persistence in college. Tinto's (1975) synthesized research also confirmed the importance of grade performance. There is little doubt that grades indicate to what degree students are academically integrated into the college environment (Creamer, 1980).

Intellectual development. Tinto (1975) stated that intellectual development deals with intrinsic forms of reward; this development is the individual's evaluation of the academic system. Medsker and Trent (1968) referred to intellectual development as the degree to which students value their college education as a process of gaining knowledge and appreciating ideas. Spady (1971) suggested that intellectual development is exposure to stimulating ideas and experiences.

Though not as important as grade performance, intellectual development was found to be an influencing variable in students' decision to drop out (Rootman, 1972; Spady, 1970; Summerskill, 1962; Tinto, 1975). Tinto states,

Though grade performance and intellectual development appear as separate components of a person's integration into the academic system, it's clear that persons with high grades are more likely to be high in measures of intellectual development. (p. 106)

The distinction may be that grade performance is generally measured objectively, whereas intellectual development is more likely a subjective measurement.

Peer-Group interaction. Terms used to describe peer-group interaction included friendship support (Flacks, 1963), social fit (Rootman, 1972), supportive groups (Hanson & Taylor, 1970), and normative congruence (Spady, 1970). In general, researchers concluded if students perceive themselves as being accepted by some form of peer-group, college persisters will be enhanced

(Baker, 1980; Beck, 1980; Simpson, Baker, & Mellinger, 1980; Spady, 1970; Spady, 1971; Tinto, 1975). In addition to research indicating that informal peer-group associations are related to persistence (Gardiner & Nazari, 1983), semi-formal extra-curricular activities were also related to students persisting in college (Chase, 1970; Ramist, 1981; Spady, 1971).

Faculty-Student interaction. Social interaction with faculty by students, in various forms and degrees, has been shown to be related to persistence in college (Bean, 1982; Gardiner & Nazari, 1983; Noel, 1976; Pascarella & Terenzini 1976; Penick & Morning, 1982; Tinto, 1982). Additional research has concluded that some types of interaction are more effective than others. The strongest form of interaction appeared to be informal contact concerning subject and/or career related material (Pascarella & Terenzini, 1977). A general conclusion that has been drawn from the existing research is that increased quantity and/or quality of faculty-student interaction is advantageous to persistence in college (Centra, 1971; Hutchenson, 1980; Keim, Van Allen, & Anderson, 1982; Pancos & Astin, 1968; Reed, 1981; Slocum, 1956; Spady, 1971; Tinto, 1975; Tinto, 1982).

Summary of the Chapter

Research has shown that social system integration, peer-group interactions, and faculty-student interaction variables can potentially affect whether students decide to remain in school or drop out. According to Tinto's theoretical

model, the influences of these variables are dependent on preceding and related variables, background characteristic, commitments, and academic integration. The strength of the research concerning social integration may lie in variables not adequately under the researchers control such as type of institutional setting. Additional variables not under the researchers control are family background, individual attributes, pre-college schooling, commitments, and academic system.

If the research on social integration is to be valid and useful in the educational system, investigators must control adequately for extraneous variables. Programs developed to enhance the educational climate of students should be based on the best available data on college student persistence.

Retention programs emphasizing human relations type courses have been promoted in educational settings to improve individual interpersonal skills and a sense of purpose in life (Meyer, 1975). Little (1971) and Wall (1979) found that a human relations course significantly strengthened students' interpersonal feelings, particularly feelings towards others. If these courses and programs are successful, then according to the research improved retention should be a by-product.

Recent evidence of programs designed to improve interpersonal skills and therefore improve retention have been cited by Beck (1980). He reported the following findings from Lurleen B. Wallace Junior College: (a) the Human Potential

Seminar (HPS), which is part of the freshman orientation, has proven to be a successful retention strategy; (b) the dropout rate for HPS students was less than for students without HPS; (c) follow-up studies, approximately one year later, showed the HPS dropout rate was 15 percent, compared to 29 percent among those without HPS; (d) on an evaluation questionnaire, 99 percent of the students responded that the HPS was helpful. This research supported the concept promoted by Tinto (1975) that peer-group interaction and to some extent, faculty-student interaction are important ingredients for social integration, and this integration is advantageous to a successful retention program.

The important issue is whether the increased retention of college students in these institutions is due to a cumulative affect of many variables as Tinto suggested or whether programs of this type can stand on their own merit as vital retention programs. In addition, can the same results be expected regardless of the type of institutional setting in which the programs are being conducted, either residential or commuter.

CHAPTER THREE

METHODOLOGY

Using Tinto's (1975) conceptual framework, the purpose of this study was to determine what relationships exist between social system integration variables (peer-group interaction and faculty-student interaction) and student dropout decisions in a two-year community college.

Instrumentation

The survey questionnaire developed for this research investigation was formulated by this researcher using the most recent and popular measurements of the variables under consideration. The questionnaire provided measures of each of the concepts in Tinto's (1975) theoretical model under investigation, except for those provided by the institution: the students' grade point average, number of college semester hours completed, the actual dropout rate and the Guidance Placement Test scores (Appendix B and C). In addition, the instrument obtained information regarding demographic characteristics, i.e. social security number, age, sex, and race. The instrument contains forty-one items and appears in Appendix D.

Description of Student Survey

The Student Survey Questionnaire (Appendix D) provides measures of five main areas under consideration: background characteristics (family background; individual attributes;

pre-college initial commitments (goal and institutional); academic system (academic grade performance and intellectual development); social system (social peer-group interaction and faculty-student interaction); and dropout decisions. In addition, item 8 measures whether an individual has completed a human relations type course. The specific breakdown by category and item number follows.

Category	Item Number
Social Security Number.....	1
Age.....	2
Human Relations Course.....	8
Background Characteristics	
Family Background	
parental education.....	7
Individual Attributes	
sex.....	3
race.....	4
Pre-college Schooling	
high school percentile rank.....	6
high school grade point average.....	5
Initial Commitment	
Goal Commitment	
highest expected degree.....	9
importance of graduation.....	11
Institution Commitment	
rank of subject institution as choice.....	10
probability of transfer.....	13
confidence of choice of subject institution...	12
Integration	
Academic System	
students' perceived intellectual development..	15-21
perceived faculty concern.....	22-26
faculty out-of-class contact (academic).....	14(1,2,3)
Social System	
student extracurricular activity.....	40
student-peer interaction.....	27-33
faculty-student interaction.....	34-38
faculty out-of-class contact (social).....	39(1,2,3)
Dropout Decisions	
intent of future educational plans.....	41

Development of the Student Survey

The student survey utilized in this study was formulated from the combined information received from the following research:

A Multiinstitutional, Path, Analytic Validation of Tinto's Model of College Withdrawal by E.T. Pascarella and D.W. Chapman (1983);

A Test and Reconceptualization of a Theoretical Model of College Withdrawal in a Commuter Institution Setting by E.T. Pascarella, P.B. Duby, and B.K. Iverson (1983);

Predicting Voluntary Freshman Year Persistence/Withdrawal Behavior in a Residential University: A Path Analytic Validation of Tinto's Model by E.T. Pascarella and P.T. Terenzini (1983);

and Path Analytic Validation of Tinto's Theory of College Student Attrition by P.T. Terenzini, E.T. Pascarella, C. Theophilides, and W. G. Lorang (1983).

Variables

As presented in Figure 1, Tinto's model consists of five major constructs or variable sets in a causal sequence: (a) background characteristics (family background, individual attributes, and pre-college schooling); (b) initial commitments (goal commitment and institutional commitment); (c) integration (academic system and social system); (d) subsequent goal and institutional commitments; and (e) withdrawal decisions.

Five constructs, background characteristics, initial commitments, academic system, social system, and withdrawal decisions, were operationalized as follows. In addition the measurements of the variables under consideration were selected using the following criteria.

Background characteristics

The background characteristics' value for each student was the sum of the Z-scores from family background, individual attributes, and pre-college schooling divided by 3. These Z-scores resulted from changing raw scores to standard scores, adding a constant of 10, and expressing the scores in standard deviation units. This approach of standardizing the scores was used by Terenzini, Pascarella, Theophilides, and Lorang (1983) and was adopted for this study to be consistent for comparison purposes.

Family background. Parental education was the most frequently used measurement of family background in the studies reviewed. Two studies, Pascarella and Terenzini (1983) and Pascarella, Duby, and Iverson (1983), used, in addition to parental education, parental income and parental financial support respectively. Neither of these measurements were used in this study since the average age of PHCC students was 26 years and they were considered adult learners.

Family background was a single variable, item 7, consisting of the average of each parents' level of formal education. A seven point scale was used with a value of 1 being assigned to "some grammar school" to a value of 7 assigned to "graduate degree." After dividing the total of both parents' score by 2, this raw score was converted to a Z score or if only one parent's education was reported, then the single score was converted to a Z score, then a constant of 10 was added.

Individual attributes. Scholastic Aptitude Test (SAT) scores were used in the majority of studies for academic aptitude with American College Test (ACT) scores being used in one additional study. Since the majority of PHCC students do not take the SAT or ACT tests, another standardized instrument was used to measure academic aptitude. The Comprehensive Guidance Placement test (English and Reading) is administered to virtually all entering students at PHCC and was the instrument utilized. The Comprehensive Guidance Placement test scores (English and Reading) were furnished by the PHCC registrar. These two scores were divided by 2 after being converted to Z-scores and adding a constant of 10, resulting in a single Z score measurement for individual attributes. Due to the variety of math competencies of students entering PHCC, three different levels of exams must be administered. These exams vary to such a degree, that for standardization purposes the math scores were not used.

A few studies requested information concerning "major area of study." The wording in these studies was inconsistent, and these studies were conducted in four-year institutions, rather than two-year; therefore this item was omitted as one of the measurements of individual attributes.

Sex, item 3, was coded 0=male and 1=female. Race, item 4, was coded 0=white and 1=non-white. To be consistent with previous research these items were not included as measurements of individual attributes. Both items are generally considered as descriptive variables in reference to dropouts.

Pre-college schooling. The two most popular measurements of pre-college schooling in the research were (a) students' percentile rank in high school, item 6, and (b) indication of high school grade point average or grade achievement, item 5. Other variables, such as high school preparation (Terenzini & Pascarella, 1983) and extracurricular activities in high school (Pascarella & Terenzini, 1983), were used in previous research, but their isolated usage eliminated them from consideration in this research.

Percentile rank in high school used a seven ordinal category assigning a value of 1 to "70% or below" through a value of 7 for "top 10%," and the grade point average in high school used a seven point scale assigning a value of 1 to "D or below" through a value of 7 for "A/A+." Each score was converted into Z-scores, adding a constant of 10, summed, then divided by 2.

Initial commitments

The commitment value was the sum of the Z-score of goal commitment, plus ten, and institutional commitment, plus ten, divided by 2.

Goal Commitment. Highest degree expected, item 9, and importance of graduating from college, item 11, were consistently used as measurements of goal commitment. A value of 1 was assigned to "Associate of Arts/Science" through a value of 6 for "LL.B. or J.D. (law)." In reference to importance of graduating, a value of 4 was assigned to "extremely important"

through 1 for "not at all important." Each score was converted into a Z-score, adding a constant of 10, summed, then divided by 2.

Institutional commitment. The following were used by all or a majority of the studies to measure institutional commitment: (1) institutional rank as a college choice, item 10; (2) probability of transferring before graduation, item 13; and (3) confidence or satisfaction that choosing the subject institution was the right choice, item 12.

A value of 4 was assigned to "1st choice" through a value of 1 for "4th choice" on item 10, a value of 5 to "SD" through 1 for "SA" on item 13, and a value of 4 to "extremely confident" through 1 for "not at all confident" on item 12. These three values were converted to Z-scores, adding a constant of 10 to each, summed, and then divided by 3.

Academic system

Academic system was operationalized as the sum of the following scales or variables: (1) grade point average, provided by the registrar; (2) a seven-item factorially derived scale measuring a student's perceived level of intellectual development, items 15-21; (3) a five-item, factorially derived scale measuring a student's perception of faculty members concern for student development and teaching, items 22-26; and (4) the frequency of a student's out-of-class contact with faculty of 10 minutes or more for each of the following purposes: (a) "to get basic information and advice about my academic program";

(b) "to discuss intellectual or course-related matters"; (c) "to discuss matters related to my future career", item 14(1,2 & 3).

The factorially derived scales were originally developed by Pascarella and Terenzini (1980). Initially 55 items were constructed and subsequently reduced to 34 items. The specific factorially derived scales used in this study to measure the academic system were taken directly from Terenzini, Pascarella, Theophilides, and Lorange (1983) and Pascarella and Terenzini (1983). In these two studies an internal consistency (alpha) reliability of .60 and .64, respectively, were reported for the academic scale.

The above mentioned four variables were used in virtually all research investigated. Value placement and/or Z score conversions were as follows: (1) GPA was converted to a Z-score, plus ten; (2) a value of 5 was assigned to "SD" through 1 for "SA" for item 15 and the reverse order being used for 16-21. The sum of these items was divided by seven and converted to a Z-score, plus 10; (3) a value of 5 was assigned to "SA" through 1 for "SD" for items 32, 23, and 26 and the reverse values for items 24 and 25. The sum of these items was divided by 5 and converted to a Z-score, plus 10; (4) The sum of each of these items was divided by 3 and the Z-score calculated.

The sum of these four Z scores, calculated from the raw scores of the academic system variables, was divided by 4. This quotient represented the academic system measurement.

Social system

Social system integration was operationally defined as the sum of the Z-scores of peer-group interaction and faculty-student interaction variables divided by 2. The factorially derived scales used to measure peer-group interaction and faculty-student interaction were originally developed by Pascarella and Terenzini (1980). Terenzini, Pascarella, Theophilides, and Lorang (1983) reported an internal consistency (alpha) reliability of .47 for these items and Terenzini and Pascarella (1983) reported .46.

Peer-Group interaction. The vast majority of research studies operationalized peer-group interaction as the sum of the scores for (1) the number of hours spent per week in extracurricular activities, item 40; and (2) a seven-item factorially derived scale measuring the extent and quality of a student's interaction with peers, items 27-33. Items 27-30 of the peer-interaction question were assigned a value of 1 for "SD" through 5 for "SA" and the values were reversed for items 31-33. The total score was divided by 5 and converted into a Z-score, adding a constant of 10. This Z-score was summed with the Z-score conversion of the raw score for extracurricular activities, then divided by 2.

Faculty-Student interaction. The majority of the research studies operationalized faculty-student interaction as the sum of the scores for (1) a five-item factorially derived scale measuring the quality and impact of a student's out-of-class contact with faculty, items 34-38, and (2) the frequency of

student non-classroom contact of 10 minutes or more with faculty concerning personal and/or social matters, item 39(1, 2, & 3). For the items concerning quality of faculty contact, a value of 5 was assigned to "SA" through 1 for "SD" for items 34, 36, 37, and 38. The reverse value assignment was used for item 35. The frequency scores for items 39(1), 39(2), and 39(3) were summed, divided by 3, then converted into a Z-score, adding a constant of 10. The frequency score was summed with the Z-score which was the result of totaling the values from the items 34-38, dividing by 5, then transforming into a Z-score, adding a constant of 10. The sum of these two Z-scores was divided by 2, resulting in the faculty-student interaction measurement.

Dropout decision

The majority of the research studies used an intent item (intention of remaining in school) and official records from the registrar to measure withdrawals. Dropout decisions, in this study, was operationally defined as the student's perceived educational plans for the future, item 41. Each student was placed in a group according to his or her degree of intent to persist as indicated by his or her selection of one of these five options: (1) I plan on returning to PHCC next term; (2) I plan on returning to PHCC but not necessarily next term; (3) I plan on attending another institution next term; (4) I plan on attending another institution, rather than PHCC, but not necessarily next term; or (5) I am not planning to attend this or any other institution anytime in the foreseeable future. These responses

were then converted to a dichotomously coded dependent measure with response (1) indicating persistence (coded 1) and responses (2), (3), (4), and (5) indicating withdrawal (coded 0). In addition, the dropout decision variable was also operationalized as actual persistence or non-persistence the following term based on school records.

Four university professors reviewed the preliminary instrument, Dr. Al Smith, Dr. Steve Olejnik, Dr. Gordon Lawrence, and Dr. Paul Fitzgerald. These individuals were instructed to take note of possible areas of revision in terms of clarity or wording in instructions, possible ambiguity of items, and relevance of items to the variables under consideration in this research study.

Pilot study. The investigator conducted a pilot study to determine the suitability of the instrument format and to provide data for analysis of the items.

Subjects. The pilot sample consisted of a total of 40 students. Ten subjects were selected randomly from the East Campus of PHCC, 10 subjects from the North Campus of PHCC, and 20 subjects from the West Campus of PHCC. The West Campus has a student population approximately equal to the East and North combined; therefore twice the number of subjects was required to increase the generalizability of the pilot study findings. A total of 38 usable surveys was returned. The survey

questionnaire proved to be an adequate and serviceable instrument in investigating variables of interest. .

The same two criteria for selection that were used in the present study applied to the pilot study with the exception of number of hours completed. In the pilot study students were eliminated, as possible subjects, if they were within nine hours of graduation, indicating a persister. These students from the pilot study could graduate at the end the 1984 Summer term by taking an acceptable load. Therefore, students were eliminated from participating in the pilot study if they had accumulated more than 50 semester hours.

Present Study

Subjects

The study sample consisted of a total of 200 students at Pasco-Hernando Community College who were enrolled for the Fall term of 1984. A total of 152 useable questionnaires were received for a 76 percent response rate. Since the West Campus of PHCC was approximately twice the size of either the East or North campuses of PHCC, which were approximately equal in size, 100 students were sampled from this campus and 50 from each of the remaining two campuses. A random selection process was used to select subjects from all students who had declared an Associate in Arts degree and/or Associate of Science degree on their Program Declaration Form (Appendix A). This limitation (a) assured relatively equal degree of commitment to the college on the part of the students and (b) attempted to eliminate

confounding variables involved with individuals who might be taking a limited number of courses to complete a certificate program, vocational certification program, personal objectives (i.e., teacher recertification) or have declared themselves in the category of undecided. The only other students who were excluded from participation in the study were individuals who were within 15 semester hours of completing their degree program. These students, by nature of their accumulated hours, were considered persisters.

Data Collection

The survey questionnaire was distributed to the randomly selected students, in their classes, on each of the three campuses by their classroom instructors. This took place during the eleventh week of the fifteen week term, three weeks after the distribution of mid-term grades and one week after the last day of official withdrawal from classes without penalty. Any student, from the original sample, withdrawing prior to the distribution date was contacted, by mail or personally, in an attempt to complete the survey questionnaire. Each participating student received in class a survey questionnaire (see Appendix D) and was asked to complete the form in class as accurately as possible. The instructions provided to the monitors are found in Appendix E. All forms were received and then analyzed by the researcher.

Data Analysis

The following null hypotheses were investigated:

Hypothesis 1. A significant proportion of the variation in student dropout rates is not explained by selected social system variables after controlling for student background characteristics, student commitments, and the student academic system (student grade performance and student intellectual development).

Hypothesis 2. A significant proportion of the variation in student dropout rates is not explained by peer-group interaction after controlling for student background characteristics, student commitments, the academic system, and faculty-student interaction.

Hypothesis 3. A significant proportion of the variation in student dropout rates is not explained by faculty-student interaction after controlling for student background characteristics, student commitments, the academic system, and peer-group interaction.

Hypothesis 4. There is no interaction effect between peer-group interaction and faculty-student interaction.

Hypothesis 5. There is no significant difference between white and non-white student population measurements on the social system variable.

Hypothesis 6. There is no significant difference between white and non-white student population measurements on the peer-group interaction variable.

Hypothesis 7. There is no significant difference between white and non-white student population measurements on the faculty-student interaction variable.

Hypothesis 8. There is no significant difference between male and female student measurements on the social system variable.

Hypothesis 9. There is no significant difference between male and female student measurements on the peer-group interaction variable.

Hypothesis 10. There is no significant difference between male and female student measurements on the faculty-student interaction variable.

Hypothesis 11. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the social system variable.

Hypothesis 12. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the peer-group interaction variable.

Hypothesis 13. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the faculty-student interaction variable.

Hypothesis 14. There is no correlation between student semester hours completed and the social system variable.

Hypothesis 15. There is no correlation between student semester hours completed and the peer-group interaction variable.

Hypothesis 16. There is no correlation between semester hours completed and the faculty-student interaction variable.

Hypothesis 17. There is no correlation between student age and the social system variable.

Hypothesis 18. There is no correlation between student age and the peer-group interaction variable.

Hypothesis 19. There is no correlation between student age and the faculty-student interaction variable.

Multiple linear regression analysis was used to test hypotheses 1-4. Hypotheses 5-13 were analyzed using a t-statistic. Hypotheses 14-19 used a Pearson product moment correlation. An alpha level of .05 was used in each case to reject the hypothesis.

In all instances where scales operationalizing components of the model were constructed from variables with different metrics (e.g. academic and social integration), the same two-step procedure was employed. First, each individual item or scale was standardized to provide the same metric (Z score), and second, a constant of 10 was added to eliminate negative numbers. The scale was then formed by summing across the standardized items (Armor, 1973-1974).

Multiple linear regression analysis was employed to determine the incremental increase in the explained variance in the persistence/withdrawal behavior (R^2 increase) associated with different variable sets in Tinto's model. The sets of variables were entered in an a priori, hierarchical manner consistent with the causal sequence of the model: (a) background characteristics (family background, individual attributes, and pre-college schooling), (b) commitments (goal and institution), (c) academic system, (d) peer-group interaction, (e) faculty-student interaction, and social system.

Summary of the Chapter

This chapter contains the methodological procedures used in this investigation. The development of the survey questionnaire was described and justified. Finally, this chapter contains a description of subjects, data collection, and data analysis techniques.

CHAPTER FOUR

FINDINGS

The purpose of this study was to determine what relationship exists between social system integration variables (peer-group interaction and faculty-student interaction) and student dropout decisions in a two-year community college. The investigation used Tinto's (1975) conceptual framework model to guide the research. The student's home campus, age, sex, race, total semester hours completed, and whether a student had completed a human relations type course were the demographic variables considered. Background characteristics, commitment (goal and institutional), academic integration, and social integration (peer-group interaction and faculty-student interaction) were the independent variables under investigation.

Two different measurements were used for the dependent variable. The first dependent variable was students' perceptions of whether or not they would return the following term. The second dependent variable was whether the student actually returned the next term. This was determined from the official registration of Term II 1985. Even though the total dropout rate was similar for both, 13.8 percent for dropout perception and 14.5 percent for actual dropout, the individuals differed greatly. Of the 21 students who replied on the Student Survey they would not be returning the following term, only 10

ultimately withdrew. This resulted in 52.4 percent change of response. Of the 131 students who said they would return to PHCC the following term, 119 actually did return; this resulted in a 9.2 percent change in students' decisions concerning dropout. Therefore, two different dependent variables were independently measured and analyzed: (1) students' perceptions of whether they would return to Pasco Hernando Community College the following term and (2) actual dropout rate the following term.

The researcher pilot tested the survey instrument to be used in the study on students attending all three campuses of Pasco Hernando Community College in the Summer term of 1984. Permission was obtained from the administration of PHCC to run the full study on the student body of PHCC the Fall term of 1984. The Student Survey (appendix D) was designed to obtain information concerning the independent and dependent variables under investigation.

The original intent of this study was to test 19 hypotheses on the total population of 152 subjects. An additional consideration of interest developed; specifically, was there differences between the three individual campuses that comprise the total population in reference to the 19 hypotheses. Because of this concern a total of four different population groups was tested.

This chapter describes the results of the study. First, demographic data of the participants are presented and discussed. Then results pertaining to each of the hypotheses under

investigation are described in terms of four groups: total campus of PHCC, East Campus of PHCC, North Campus of PHCC, and West Campus of PHCC. The four groups are discussed in reference to the influence social integration, peer-group interaction, faculty-student interaction, and the interaction of peer-group and faculty-student variables had on dropouts with reference to both dependent variables, perception of dropout decision, and actual dropout decision.

Multiple linear regression was used to test each of the first four hypotheses. Each of the four hypotheses was tested for each of the population groups, total campus, East Campus, North Campus, and West Campus, using first the students' perceptions of their dropout decisions as the dependent variable then the students' actual dropout rate. The total number of analyses was 32. The next nine hypotheses investigated whether there was a difference between white and non-white students, male and female students, and students who had taken a human relations course and those who had not on the social system, peer-group interaction, and faculty-student interaction variables. A t-test was used to test these hypotheses. Each of the nine hypotheses was tested using each of the four groups as separate populations. This resulted in 36 different analyses. The remaining six hypotheses investigated whether there was a relationship between accumulated hours and age with social system, peer-group, and faculty-student interaction variables. Each of the six hypotheses was tested using each of the four groups as separate populations. This

resulted in a total of 24 analyses. The total number of tests for the four separate groups was 92. A significance criterion of .05 was used to reject each of the 19 hypotheses.

Finally, an ANOVA was used to analyze differences between individual campuses on variables of interest. Variables that resulted in a significant F-statistic were analyzed with a computed Bonferroni-statistic. A .05 level of statistical significance was used to indicate a difference.

Descriptive Analysis

A subprogram of the Northwest Analytical Statpak computer program was used to calculate the frequencies and percentages for the demographic variables. Other subprograms of the NWA were used to calculate the ANOVA, t-statistic, correlation coefficients, and multiple linear regression results. A total of 200 questionnaires were distributed with 152 useable surveys being returned. This resulted in a 76 percent response rate available for analysis.

Demographic Variables

The data regarding the demographic variables are presented in Table 1. Inspection of Table 1 revealed the proportion of usable responses from each of the three campuses was proportional to the total student population attending those individual campuses. The total population under investigation was 1146 students, East Campus (23 percent), North Campus (25.7 percent), and West Campus (51.3 percent). All statistics

Table 1

Frequency and Percentage Distribution for Demographic Variables

VARIABLES	PHCC TOTAL		EAST CAMPUS		NORTH CAMPUS		WEST CAMPUS	
	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT
Subjects	152	100	39	25.6	39	25.6	74	48.6
Ages								
17-21	83	54.6	26	66.6	21	53.8	36	48.6
22-26	20	13.2	6	15.3	5	12.8	9	12.2
27-31	21	13.8	3	7.6	4	10.2	14	18.9
32-36	9	5.9	2	5.1	2	5.1	5	6.8
37-41	6	3.9	1	2.5	2	5.1	3	4.1
42-46	8	5.3	0	0.0	5	12.8	3	4.1
47-51	2	1.3	1	2.5	0	0.0	1	1.3
52-56	2	1.3	0	0.0	0	0.0	2	2.7
57+	1	.7	0	0.0	0	0.0	1	1.3
Sex								
males	50	32.9	11	28.2	14	35.9	25	33.8
females	102	67.1	28	71.8	25	64.1	49	66.2
Race								
white	142	93.4	34	87.2	36	92.3	72	97.3
non-white	10	6.6	5	12.8	3	7.7	2	2.7

(continued)

Table 1-continued

VARIABLES	PHCC TOTAL		EAST CAMPUS		NORTH CAMPUS		WEST CAMPUS	
	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT
Human Relations								
yes	59	38.8	15	38.5	17	43.6	27	36.5
no	93	61.2	24	61.5	22	56.4	47	63.5
Accumulated Credit Hours								
1- 9	43	28.2	15	38.4	10	25.6	18	24.3
10-18	44	28.9	10	25.6	8	20.5	26	35.1
19-27	28	18.4	5	12.8	4	10.2	19	25.6
28-36	17	11.1	5	12.8	8	20.5	4	5.4
37-45	12	7.8	2	5.1	8	20.5	2	2.7
46-54	7	4.6	2	5.1	1	2.5	4	5.4
55+	1	.6	0	0.0	0	0.0	1	1.3
Dropout Decision Perception								
return	131	86.2	33	84.6	33	84.6	65	87.8
dropout	21	13.2	6	15.4	6	15.4	9	12.2
Dropout Decision Actual								
return	130	85.5	33	84.6	35	89.7	62	83.8
dropout	22	14.5	6	15.4	4	10.3	12	16.2

concerning the total population were obtained from the Office of the Registrar. The sample consisted of 152 students, East Campus (25.6 percent), North Campus (25.6 percent), and West Campus (48.6 percent). There were slight variations in percentages between the sample and the actual percentage enrollment figures for the total population of each of the three campuses.

Slightly more than half of the respondents (54.6 percent) were between the ages of 17 and 21. The remaining age groups and percentages were, 22-26 (13.2 percent), 27-31 (13.8 percent), 32-36 (5.9 percent), 37-41 (3.9 percent), 42-46 (5.3 percent), 47-51 (1.3 percent), 52-56 (1.3 percent), and 57+ (.7 percent). The mean age for the sample subjects was 25.1, which approximated the mean age of the total student population of 26.

The females out-numbered the males slightly better than two to one, with 67.1 percent of the respondents being female and 32.9 percent being males. These percentages are comparable to the total population, which contained 61.5 percent females and 38.5 percent males. Each of the three campuses was represented by percentages that were within 5 percent of the percentages of their respective total populations.

The white and non-white participants showed the same proportional trend that was reported for the different sexes. The sample population of 93.4 percent white and 6.6 percent non-white was within 2 percent of the total college student population of 5.4 percent non-white and 94.6 percent white. Different percentages were reported for each campus, but these

differences adequately reflected the percentages of white and non-white students attending those individual campuses.

The percentage of students, in the sample, who had had a human relations type course was 38.8 percent. Similar percentages were found on the East and West campuses, 38.5 percent and 36.5 percent respectively. A higher number of subjects had a human relations type course on the North Campus (43.6 percent). Even though accurate records were not available for the total population, in reference to this variable, this researcher's general impression was that similar participation had occurred for the total population.

The next item listed in Table 1 revealed the frequency range of accumulated credit hours. Students with 1 to 9 hours accounted for (28.2 percent) of the total population, 10 to 18 (28.9 percent), 19 to 27 (18.4 percent), 28 to 36 (11.1 percent), 37 to 45 (7.8 percent), 46 to 54 (4.6 percent), and 55+ (.6 percent).

Differences appeared in accumulated semester hour frequency figures between campuses. The total campus and East Campus had similar percentages of students with less than 28 semester credit hours accumulated, 75.5 percent and 76.8 percent respectively. These percentages indicated a larger number of freshmen in attendance than sophomores. West Campus had an even larger proportion of freshmen with 85 percent. North Campus appeared to have the most balanced freshmen and sophomore classes with 56.3 percent of the students having less than 28 semester hours accumulated.

The mean for accumulated semester credit hours for the sample was 19.0 which approximated the total population mean of 20.2. This slight difference may have been attributed to the fact the sample had a limit on the maximum number of accumulated hours a student could have in order to be eligible for the study.

The last variable listed was dropout decision, both the students' perceptions and actual dropout decision. The number of individuals who perceived themselves as not returning was 21. This was very close to the actual dropout rate of 22. The range between campuses was 3.2 percent for the perceived decision and 5.9 percent for the actual decision. East Campus was very consistent with 15.4 percent recorded for both perceived decision to drop out and actual dropout decision. North Campus lost two fewer students than perceived which decreased their perceived percentage from 15.4 percent to a 10.3 actual dropout percentage. West Campus lost three more students than anticipated which increased their percentages of dropouts from a perceived dropout rate of 12.2 percent to an actual dropout rate of 16.2 percent.

Additional statistics of comparative value, which are not recorded in Table 1, were the English and reading scores from the Guidance Placement Test (Appendices B and C). These entrance tests reflected students' ability in reading comprehension and English usage. The total college population mean for reading was 24.7 and 25.1 for the sample under consideration. The

total college population mean for English was 26.5 and 26.8 for the sample. These data, combined with the demographic information in Table 1, reflected very similar data between the sample and the total population under consideration.

Correlations

Pearson product moment correlations for all variables under investigation for the sample are shown in Table 2. Correlations for East Campus are listed later in Table 3, North Campus Table 4, and West Campus Table 5. The dichotomous variables were coded as follows: persisters 1, withdraws 0; males 0, females 1; white students 0, non-white 1; and having a human relations type course 1, not having the course 0.

Most of the intercorrelations for total campus were non-significant. Only fourteen, out of 91 correlations, were found to be significant at the .05 level. Because retention was the dependent variable the two significant correlations relating to retention are presented first. The higher one's background support scores, the more likely one would actually remain in school ($r=.197$). The only other variable relating to actual dropout rate was perception of dropout decision and it showed a positive correlation ($r=.377$) with the actual dropout rate. The following correlations are presented in the order in which they appear in Table 2. Older students seemed to be academically integrated to a greater degree than younger students ($r=.272$). More females had had a human relations type course ($r=-.691$), and were more committed than males ($r=.206$). The more

Table 2

Pearson Product Moment Correlation for Endogenous and Exogenous Variables--Total Campus

VARIABLES	1	2	3	4	5	6
1. Age		.156	-.104	-.021	.026	-.142
2. Sex			-.040	-.061	.691*	.007
3. Race				.036	.115	-.153
4. Accumulated Hours					.384*	.194*
5. Human Relations Course						-.127
6. Background Characteristics						
7. Commitment						
8. Academic Integration						
9. Peer-group Interaction						
10. Faculty-student Interaction						
11. Social Integration						
12. Dropout Perception						
13. Dropout Actual						

(continued)

* $p < .05$

Table 2-continued

VARIABLES	7	8	9	10	11	12	13
1. Age	.022	.272*	.008	-.047	-.048	.091	.023
2. Sex	.206*	.158	-.001	.106	-.037	-.030	.030
3. Race	-.003	-.146	-.098	-.076	-.085	-.003	.109
4. Accumulated Hours	.177	-.008	-.038	.004	-.093	-.059	.112
5. Human Relations Course	.054	.054	.039	.096	.006	-.089	.082
6. Background Characteristics	.086	.172	.075	.061	-.035	-.118	.197*
7. Commitment		.296*	-.050	.150	-.099	.007	.055
8. Academic Integration			.208*	.415*	.200*	.062	.143
9. Peer-group Interaction				.318*	.575*	.117	.130
10. Faculty-student Interaction					.612*	.090	.083
11. Social Integration						.056	-.048
12. Dropout Perception							.377*
13. Dropout Actual							

*p<.05

credit hours a student accumulated, the higher were the scores on the three measurements that comprised background characteristics ($r=.194$) and the more likely the students were to have had a human relations type course ($r=.384$). The following relationships were found to have a positive correlation with academic integration: commitment ($r=.296$), peer-group interaction ($r=.208$), faculty-student interaction ($r=.415$), and social integration ($r=.200$). Peer-group interaction also had a positive correlation with faculty-student interaction ($r=.318$) and social integration ($r=.575$). Finally, faculty-student interaction was positively correlated with social integration ($r=.612$).

East Campus

Among the 78 correlations related to the East Campus, only eight were significant at the .05 level (see Table 3). The two statistically significant correlations relating to the dependent variable are presented first. The higher the academic integration the more likely the students were to actually stay in school ($r=.446$). Second, females perceived themselves as returning to school more often than males ($r=.486$). The remaining six statistically significant correlations are presented in the order in which they appear in Table 3. Female students scored higher on the peer-group interaction scale ($r=.357$) than male students. The more credit hours accumulated by a student indicated a greater likelihood of a student taking a human relations type course ($r=.476$). The more a student indicated a commitment to goals and institution,

Table 3

Pearson Product Moment Correlation for Endogenous and Exogenous Variables--East Campus

VARIABLES	1	2	3	4	5	6	7
1. Age		.201	-.008	-.109	.024	-.273	.057
2. Sex			-.101	-.189	.144	.157	-.142
3. Race				-.017	.012	-.137	-.045
4. Accumulated Hours					.476*	.263	.269
5. Human Relations Course						.291	-.016
6. Background Characteristics							.125
7. Commitment							
8. Academic Integration							
9. Peer-group Interaction							
10. Faculty-student Interaction							
11. Social Interaction							
12. Dropout Perception							
13. Dropout Actual							

(continued)

* $p < .05$

Table 3-continued

VARIABLES	8	9	10	11	12	13
1. Age	.227	-.149	.079	-.058	.202	.159
2. Sex	.314	.357*	.290	-.041	.486*	.207
3. Race	-.257	-.206	-.196	-.157	-.049	.164
4. Accumulated Hours	.100	-.083	.054	-.162	-.127	.237
5. Human Relations Course	.046	.197	.172	-.007	.045	.191
6. Background Characteristics	.300	.171	.037	-.108	-.019	.172
7. Commitment	.360*	-.119	.044	-.0002	-.223	.164
8. Academic Integration		.185	.189	-.067	.166	.446*
9. Peer-group Interaction			.506*	.522*	.031	-.121
10. Faculty-student Interaction				.512*	.148	.225
11. Social Integration					-.259	-.272
12. Dropout Perception						.212
13. Dropout Actual						

*p<.05

the higher the tendency for academic integration ($r=.360$). Peer-group interaction was positively correlated with faculty-student interaction ($r=.506$) and both peer-group interaction ($r=.522$) and faculty-student interaction ($r=.512$) were correlated with social integration in a positive direction.

North Campus

Eleven of the 78 correlations involving North Campus students were found to be significant at the .05 level (see Table 4). There was only one statistically significant correlation involving dropout rate at this level. Students' perceptions of dropout decisions were positively correlated with actual dropout decision ($r=.324$). The remaining 10 correlations are presented in the order in which they appear in Table 4. Older students tended to have lower levels of background characteristics ($r=-.511$) and females appeared more committed ($r=.379$) than males. A human relations type course was more likely to be taken by students with more accumulated credit hours ($r=.340$). Those students with higher peer-group interaction scores ($r=-.384$) and social integration scores ($r=-.399$) were less likely to have taken a human relations type course. Students with higher academic integration had higher levels of faculty-student interaction ($r=.482$) and social integration ($r=.341$). Peer-group interaction was positively related to both faculty-student interaction ($r=.385$) and social integration ($r=.836$). Faculty-student interaction was also related to social integration in a positive direction ($r=.817$).

Table 4

Pearson Product Moment Correlation for Endogenous and Exogenous Variables--North Campus

VARIABLES	1	2	3	4	5	6	7
1. Age		.136	-.210	-.101	-.158	-.511*	.074
2. Sex			.015	-.245	-.097	-.214	.379*
3. Race				-.034	.134	-.231	-.083
4. Accumulated Hours					.340*	.104	.208
5. Human Relations Course						-.016	.037
6. Background Characteristics							-.081
7. Commitment							
8. Academic Integration							
9. Peer-group Interaction							
10. Faculty-student Interaction							
11. Social Integration							
12. Dropout Perception							
13. Dropout Actual							

(continued)

* $p < .05$

Table 4-continued

VARIABLES	8	9	10	11	12	13
1. Age	.267	.014	-.034	-.019	.129	-.063
2. Sex	.099	.045	.077	.089	-.023	.099
3. Race	-.161	-.009	-.233	-.146	-.144	.098
4. Accumulated Hours	-.101	-.160	-.106	-.184	-.007	-.224
5. Human Relations Course	-.081	-.384*	-.251	-.399*	-.198	-.044
6. Background Characteristics	-.010	.060	.181	.135	-.023	.113
7. Commitment	.251	-.138	.069	-.055	-.062	-.173
8. Academic Integration		.097	.482*	.341*	-.036	.061
9. Peer-group Interaction			.385*	.836*	.207	.210
10. Faculty-student Interaction				.817*	-.010	-.264
11. Social Integration					.134	-.012
12. Dropout Perception						.324*
13. Dropout Actual						

* $p < .05$

West Campus

West Campus had the highest number of statistically significant correlations of the three campuses with 15, out of 78, being significant at the .05 level (see Table 5).

The only statistically significant correlation related to the dependent variable was background characteristics. The higher the student's level of background characteristics the more likely a student was to persist ($r=.288$). The remaining 14 correlations are presented according to the frequency a particular variable achieved statistical significance. Levels of academic integration correlated positively with levels of background characteristics ($r=.233$), age ($r=.339$), degree of student commitment ($r=.285$), peer-group interaction ($r=.325$), faculty-student interaction ($r=.549$), and social integration ($r=.545$). Peer-group interaction correlated positively with levels of student commitment ($r=.237$), faculty-student interaction ($r=.254$), and social integration ($r=.809$). Social integration was correlated positively with levels of commitment ($r=.287$) and faculty-student interaction ($r=.772$). Number of accumulated hours correlated positively with levels of background characteristics ($r=.270$) and students who took a human relations type course tended generally to have more accumulated credit hours ($r=.357$). Female students had a higher level of commitment than male students ($r=.275$).

Table 5

Pearson Product Moment Correlation for Endogenous and Exogenous Variables--West Campus

VARIABLES	1	2	3	4	5	6	7
1. Age		.178	-.040	.030	.125	.054	.022
2. Sex			-.057	.125	.126	.036	.275*
3. Race				.171	.220	-.044	.064
4. Accumulated Hours					.357*	.270*	.154
5. Human Relations Course						.126	.105
6. Background Characteristic							.168
7. Commitment							
8. Academic Integration							
9. Peer-group Interaction							
10. Faculty-student Interaction							
11. Social Integration							
12. Dropout Perception							
13. Dropout Actual							

(continued)

*p<.05

Table 5-continued

VARIABLES	8	9	10	11	12	13
1. Age	.339*	.034	-.022	.014	.090	.009
2. Sex	.117	-.182	-.017	-.140	-.052	-.082
3. Race	-.064	-.050	-.050	-.021	.039	.073
4. Accumulated Hours	.049	.012	.062	.030	-.075	.186
5. Human Relations Course	.170	.163	.218	.227	-.111	.105
6. Background Characteristics	.233*	.023	.090	.077	-.035	.288*
7. Commitment	.285*	.237*	.207	.287*	.160	.103
8. Academic Integration		.325*	.549*	.545*	.105	.132
9. Peer-group Interaction			.254*	.809*	.171	.217
10. Faculty-student Interaction				.772*	.059	.136
11. Social Integration					.146	.217
12. Dropout Perception						.121
13. Dropout Actual						

* $p < .05$

As might be expected the peer-group interaction, faculty-student interaction, and social integration variables were all highly correlated. This is understandable since peer-group interaction and faculty-student interaction variables comprise the social integration variable. Only two variables were significantly correlated with actual dropout rates. For the total and West campuses the higher the student's background characteristics the more likely the student would persist. East Campus students with higher academic integration levels were more likely to persist. The remaining statistically significant correlations between the variables under study showed a variety of relationships. These relationships indicated various degrees of support for Tinto's inclusions of these variables in his model.

Regression Analysis

Tinto's conceptual model considered in this study was given in Figure 1 (see page 3).

Test of Hypotheses 1-4

Hypothesis 1. A significant proportion of the variation in student dropout rates is not explained by selected social system variables after controlling for student background characteristics, student commitments, and the academic system.

The test of the full model was a test of the regression coefficients background characteristics, commitments, academic

system, and social system. The full model yielded an R^2 of .022 with an F-statistic of .835 which was not significant at the .05 level. The test of this hypothesis was a test of the partial regression coefficient for the social system variable given that background characteristics, commitments, and academic system were in the model. The results of the analysis are presented in Table 6.

For the total campus when the dependent variable was students' perceptions of dropout decision, the R^2 with all variables in the model was .022. Without social system in the model it was .021. Thus adding the social system variable explained .1% additional variation in perceived dropout. This increase in variation resulted in a computed F-statistic of .192, which did not exceed the critical F-statistic at the .05 level. Therefore the conclusion was to fail to reject Hypothesis 1. The social system variable does not help predict dropout rate.

The full model for East Campus resulted in an R^2 of .185 with an F-statistic of 1.933, which was not significant at the .05 level. The R^2 increase and computed F-statistic for East Campus for the partial regression coefficient were .062 and 2.569. This was not significant at the .05 level.

The full model for North Campus yielded an R^2 of .029 with a non-significant F-statistic of .253 at the .05 level. The partial regression coefficient had an R^2 increase of .024 and an

Table 6

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Perceptions of Dropout Decisions With Social System Integration by Campus

Dependent Variable: Students' Perceptions of Dropout Decisions

Campus	R^2 full	F	R^2 increase	F partial
Total	.022	.835	.001	.192
East	.185	1.933	.062	2.569
North	.029	.253	.024	.837
West	.042	.748	.006	.448

* $p < .05$

Table 7

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Actual Dropout Decisions With Social System Integration by Campus

Dependent Variable: Students' Actual Dropout Decisions

Campus	R^2 full	F	R^2 increase	F partial
Total	.055	2.152	.004	.686
East	.258	2.962*	.058	2.651
North	.041	.364	.001	.009
West	.124	2.435	.034	2.704

* $p < .05$

F-statistic of .837. This was also non-significant at the .05 level.

The full model for West Campus resulted in an R^2 of .042 with an F-statistic of .748, which was non-significant at the .05 level. The partial regression coefficient also was non-significant at the .05 level with an R^2 increase of .006 and an F-statistic of .448.

Table 7 contains the other half of the results to Hypothesis 1 with students' actual dropout decisions as the dependent variable. The test of the full model yielded an R^2 of .055 with an F-statistic of 2.152, which was not significant at the .05 level. Without social system in the model, the R^2 was .051, which resulted in an R^2 increase of .004. This increase in variation resulted in a computed F-statistic of .686, which did not exceed the critical F-statistic at the .05 level. Therefore the conclusion was fail to reject at the .05 level for Hypothesis 1.

The full model for East Campus had an R^2 of .258 with an F-statistic of 2.962, which was significant at the .05 level. The R^2 for the partial regression coefficient for East Campus was .200, which resulted in an R^2 increase of .058 and produced a computed F-statistic of 2.651. This did not exceed the critical F-statistic at the .05 level and the decision was not to reject Hypothesis 1. Social system integration did not improve prediction of dropping out. The full model for North

Campus had an R^2 of .041 and an F-statistic of .364. West Campus had an R^2 of .124 and an F-statistic of 2.435. Both were non-significant at the .05 level. The R^2 increase for both North Campus of .001 and West Campus of .034, with computed F-statistics of .009 and 2.704 respectively, did not exceed the critical F-statistic at the .05 level, therefore resulting in a failure to reject decision for Hypothesis 1.

Hypothesis 1 was tested on four different populations, total campus, East Campus, North Campus, and West Campus. Two different dependent variables were used, students' perceptions of dropout decisions and students' actual dropout rate. Of the eight separate tests of Hypothesis 1, one was found to be statistically significant at the .05 level.

Hypothesis 2. A significant proportion of the variation in student dropout rates is not explained by peer-group interaction after controlling for student background characteristics, student commitment, the academic system, and faculty-student interaction.

The test of this hypothesis was a test of the partial regression coefficient for peer-group interaction given that background characteristics, commitments, academic system, and faculty-student interaction were in the model. The results of the analysis are presented in Table 8 with students' perceptions of dropout decisions as the dependent variable.

The R^2 , with all variables in the full model, for total campus was .035 with an F-statistic of 1.065. Without peer

Table 8

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Perceptions of Dropout Decisions With Peer-Group Interaction by Campus

Dependent Variable: Students' Perceptions of Dropout Decisions

Campus	R^2 full	F	R^2 increase	F partial
Total	.035	1.065	.009	1.420
East	.158	1.181	.016	.623
North	.054	.374	.049	1.551
West	.050	.715	.015	1.037

* $p < .05$

Table 9

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Actual Dropout Decisions With Peer-Group Interaction by Campus

Dependent Variable: Students' Actual Dropout Decisions

Campus	R^2 full	F	R^2 increase	F partial
Total	.060	1.875	.009	1.333
East	.334	3.315*	.112	5.558*
North	.242	2.112	.109	4.728*
West	.131	2.055	.035	2.773

* $p < .05$

group interaction in the model, it was .026. The peer-group interaction variable therefore explained an additional .9 percent of the variation in dropout rate. This increase in variation resulted in a computed F-statistic of 1.420, which did not exceed the critical F-statistic at the .05 level. The conclusion was to fail to reject Hypothesis 2. Peer-group interaction did not improve prediction of dropping out.

The full models for East, North, and West campuses resulted in R^2 's of .158, .054, and .050, with F-statistics of 1.181, .374, and .715. All three were non-significant at the .05 level. The R^2 increase and computed F-statistic for the partial regression coefficients for East Campus were .016 and .623, for North Campus .049 and 1.551, and for West Campus .015 and 1.037. In each of the three campuses the computed F-statistic did not exceed the critical F-statistic at the .05 level. All three campuses resulted in a failure to reject decision for Hypothesis 2.

With actual drop out as the dependent variable (Table 9), the full model for total campus yielded an R^2 of .060 with a F-statistic of 1.875. This was not significant at the .05 level. The partial regression coefficient variable for total campus had an R^2 increase of .009. With a computed F-statistic of 1.333, the decision was to fail to reject Hypothesis 2, since the critical F-statistic was not exceeded at the .05 level. East Campus full model was significant at the .05 level with an

R^2 of .334 and a F-statistic Of 3.315. The partial regression coefficient of -.199 resulted in an R^2 increase of .112 and a F-statistic of 5.558. Since this did exceed the critical F-statistic at the .05 level the decision was to reject Hypothesis 2. The higher the peer-group interaction score the more likely a student would drop out.

The full model for North Campus had an R^2 of .242 with an F-statistic of 2.112 and West Campus had an R^2 of .131 with an F-statistic of 2.055. Both were non-significant at the .05 level. The partial regression coefficient of .157 for North Campus resulted in an R^2 increase of .109 and a computed F-statistic of 4.728, which exceeded the critical F-statistic at the .05 level. This resulted in the conclusion to reject Hypothesis 2. The higher the peer-group interaction score the more likely the student will remain in school. West Campus had an R^2 increase of .035 that resulted in computed F-statistics of 2.773 . This did not exceed the critical F-statistic at the .05 level resulting in a fail to reject conclusion for Hypothesis 2.

Hypothesis 2 was tested on four different populations, total, East, North, and West campuses. Two different dependent variables were used, students' perceptions of dropout decisions and students' actual dropout rate. Of the eight separate tests of Hypothesis 2 only two were found to be statistically significant. On the East and North campuses, with students' actual dropout rate as the dependent variable, Hypothesis 2 was found to be statistically significant.

Hypothesis 3. A significant proportion of the variation in student dropout rate is not explained by faculty-student interaction after controlling for student background characteristics, student commitments, the academic system, and peer-group interaction.

The test of the hypothesis was a test of the partial regression coefficient for the faculty-student interaction given that background characteristics, commitments, academic system, and peer-group interaction were in the model. The results of the analysis are presented in Table 10 with students' perceptions of dropout decisions as the dependent variable.

The test of the full model with all the variables in yielded an R^2 of .035 and an F-statistic of 1.065. This was found to be non-significant at the .05 level. The partial regression coefficient for the total campus was .034. The faculty student interaction variable therefore explained an additional .1 percent of the variation in dropout rate. This increase in variation resulted in a computed F-statistic of .268, which did not exceed the critical F-statistic at the .05 level. Therefore the conclusion was to fail to reject Hypothesis 3. Faculty student interaction did not improve prediction of perceived dropouts.

The full models for the East, North, and West campuses resulted in R^2 's of .152, .054, and .050 with F-statistics of 1.181, .374, and .715. All were non-significant at the .05 level. The R^2 increase and computed F-statistic for East Campus

Table 10

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Perceptions of Dropout Decisions With Faculty-Student Interaction by Campus

Dependent Variable: Students' Perceptions of Dropout Decisions

Campus	R^2	full F	R^2 increase	F partial
Total	.035	1.065	.001	.268
East	.152	1.181	.025	.978
North	.054	.374	.006	.192
West	.050	.715	.001	.031

* $p < .05$

Table 11

R^2 , R^2 Increase and Computed F ratios for the Full Model and Partial Regression Coefficients Relating Students' Actual Dropout Decisions With Faculty-Student Interaction by Campus

Dependent Variable: Students' Actual Dropout Decisions

Campus	R^2	F	R^2 increase	F partial
Total	.063	1.875	.001	.002
East	.334	3.305*	.086	4.453*
North	.242	2.112	.167	7.284*
West	.131	2.055	.005	.356

* $p < .05$

were .025 and .978, for North Campus .006 and .192, for West Campus .001 and .031. In each case the computed F-statistic did not exceed the critical F-statistic at the .05 level and the decision was to fail to reject Hypothesis 3.

The full model R^2 for total campus, with students' actual dropout decisions as the dependent variable, was .063. This resulted in a non-significant F-statistic of 1.875. Without faculty-student interaction in the model, the R^2 for the partial regression coefficient was .062. Thus faculty-student interaction explained .1 percent additional variation in dropout. This increase in variation gave a computed F-statistic of .002, which did not exceed the critical F-statistic at the .05 level. The conclusion was to fail to reject Hypothesis 3.

The full model on East Campus had an R^2 of .334 and an F-statistic of 3.305, which was significant at the .05 level. The East Campus partial regression coefficient of .136 had an increase in R^2 of .086, which gave a computed F-statistic of 4.253. This variation in R^2 was significant at the .05 level, since the computed F-statistic exceeded the critical F-statistic. The conclusion was to reject Hypothesis 3. Students who had high scores on faculty-student interaction were less likely to drop out. The full model of North and West campuses resulted in R^2 's of .242 and .131 and non-significant F-statistics of 2.112 and 2.055 at the .05 level. The partial regression coefficient for West campus did not achieve significance at the .05 level, with R^2 increase of .005 and an

F-statistic of .356. This resulted in a fail to reject decision for Hypothesis 3. The partial regression coefficient of $-.244$ for North Campus resulted in an R^2 increase of .167 and an F-statistic of 7.284. This variation in the R^2 was significant at the .05 level, since the computed F-statistic exceeded the critical F-statistic. The conclusion was to reject Hypothesis 3. Students who had high scores on faculty-student interaction were more likely to drop out than students who had low scores on the variable.

Hypothesis 3 was tested on four separate groups, total, East, North, and West campuses. Two different dependent variables were used, students' perceptions of dropout decisions and students' actual dropout rate. Of the eight separate tests of Hypothesis 3, both East Campus and North Campus, with students' actual dropout rate as the dependent variable, were found to be significant.

Hypothesis 4. There is no interaction effect between peer-group interaction and faculty-student interaction.

The test of the hypothesis was a test of the partial regression coefficient for the interaction between peer-group interaction and faculty-student interaction given background characteristics, commitments, academic system, peer-group interaction, and faculty-student interaction were in the model. The results of the analysis are presented in Table 12 with students' perceptions of dropout decisions as the dependent variable.

Table 12

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Perceptions of Dropout Decisions With The Interaction Effect of Peer-Group and Faculty-Student Interaction by Campus

Dependent Variable: Students' Perceptions of Dropout Decisions				
Campus	R^2 full	F	R^2 increase	F partial
Total	.024	.587	.004	.001
East	.155	.981	.004	.137
North	.064	.365	.010	.357
West	.055	.644	.005	.327

* $p < .05$

Table 13

R^2 , R^2 Increase and Computed F Ratios for the Full Model and Partial Regression Coefficients Relating Students' Actual Dropout Decisions With The Interaction Effect of Peer-Group Interaction and Faculty-Student Interaction by Campus

Dependent Variable: Students' Actual Dropout Decisions				
Campus	R^2 full	F	R^2 increase	F partial
Total	.064	1.875	.003	.522
East	.340	2.746*	.006	.298
North	.292	2.198	.049	2.232
West	.132	1.695	.001	.107

* $p < .05$

The full models for total, East, North, and West campuses yielded R^2 's of .024, .155, .064, and .055, with F-statistics of .587, .981, .365, and .644 respectively. All four were non-significant at the .05 level. When the dependent variable was students' perceptions of dropout decisions, the partial regression coefficients' R^2 increase and computed F-statistic were .004 and .001 for total campus, .004 and .137 for East Campus, .010 and .357 for North Campus, and .005 and .327 for West Campus. None of these computed F-statistics exceeded the critical F-statistic at the .05 level. The decision in all four cases was a fail to reject Hypothesis 4. There was no interaction effect between the peer-group interaction variable and the faculty-student interaction variable.

When the dependent variable was students' actual dropout decisions (Table 13), the full models yielded R^2 and F-statistics as follows: for total campus R^2 .064 and F-statistic 1.875, for North Campus R^2 .292 and F-statistic 2.198, and for West Campus R^2 1.32 and F-statistic 1.695. All were non-significant at the .05 level. The partial regression coefficients of the total campus had an R^2 increase of .003 and a computed F-statistic of .522, North had an R^2 increase of .049 and an F-statistic of 2.232, and West Campus had an R^2 increase of .001, with an F-statistic of .107. Each failed to exceed the critical F-statistic and resulted in a conclusion of a fail to reject Hypothesis 4. East Campus's full model had a computed F-statistic of 2.746, with an R^2 of .340, which did exceed the

critical F-statistic at the .05 level. The partial regression coefficient resulted in an R^2 increase of .006, with an F-statistic of .298 and it was not significant at the .05 level. The decision was fail to reject Hypothesis 4. There was no interaction effect between peer-group interaction and faculty-student interaction variables.

Of the 32 tests involving Hypotheses 1-4, only four were found to be significant. Hypotheses 2 and 3 were found to be significant only when the dependent variable was students' actual dropout decisions and only when the student population came from the East or North campuses.

Test of Hypotheses 5-13

Hypothesis 5. There is no significant difference between white and non-white student population measurements on the social system variable.

The results of Hypothesis 5 are rescored in Table 14. The total campus mean for white students was 10.074 and 9.750 for non-white students. This resulted in a computed t-statistic of 1.942, which did not exceed the critical t-statistic at the .05 level. Since the alpha was set at .05 for all hypotheses, the conclusion was to fail to reject Hypothesis 5. White students did not score significantly higher on the social system variable than non-white students.

White students on East Campus had a mean of 10.409 and non-white students 9.678. The sample size and within group variances were both unequal and proportional. Under this

Table 14

Means, S.D., and Computed t-Statistic Comparing White and Non-White Students on the Social System Variable

CAMPUS	HYP.	NO.	WHITE STUDENTS		NO.	NON-WHITE STUDENTS		df	t
			MEAN	S.D.		MEAN	S.D.		
Total	5	142	10.074	.972	10	9.750	.460	150	1.942
East	5	34	10.409	1.658	5	9.678	.426	37	2.134*
North	5	36	10.064	.559	3	9.758	.726	37	.714
West	5	72	9.921	.604	2	9.919	.199	72	.014

* $p < .05$

condition the independent sample t-test tends to be conservative. Even with a conservative test the results met the criterion for significance at the .05 level. East Campus students showed a significant difference at the .05 level with a computed t-statistic of 2.134 in the direction of white students. North Campus reported means of 10.064 for white students and 9.758 for non-white students with a computed t-statistic of .714. West Campus students means were 9.921 for white students and 9.919 for non-white students with a reported t-statistic of .014.

The conclusion for East Campus was to reject Hypothesis 5 and fail to reject it for the North and West campuses. East Campus white students scored higher on the social integration variable than did the non-white students. There were no differences between the white and non-white students on the social system variable by students on either the North or West campuses.

Hypothesis 6. There is no significant differences between white and non-white student population measurements on the peer-group interaction variable.

Table 15 contains the data for Hypothesis 6. The computed t-statistic for total campus was 1.336 with means of 10.017 for white students and 9.724 for non-white students. Since this did not exceed the critical t-statistic at the .05 level the result was fail to reject the Hypothesis 6. There was no difference between white and non-white students' scores on the peer-group

Table 15

Means, S.D., and Computed t-Statistic Comparing White and Non-White Students on the Peer-Group Interaction Variable

CAMPUS	HYP.	WHITE STUDENTS		NON-WHITE STUDENTS			df	t
		NO.	MEAN	S.D.	NO.	MEAN	S.D.	
Total	6	142	10.017	.758	10	9.724	.664	150
East	6	34	9.943	.761	5	9.491	.481	37
North	6	36	10.101	.710	3	10.076	.923	37
West	6	72	10.009	.785	2	9.775	.830	72

* $p < .05$

interaction variable. East Campus reported means of 9.943 for white and 9.491 for non-white students with a t-statistic of 1.796. North Campus means were 10.101 for white and 9.726 for non-white students with a t-statistic of .045. West Campus reported means of 10.009 for white and 9.775 for non-white students with a t-statistic of .394. These three hypotheses also resulted in a fail to reject decision of Hypothesis 6.

Hypothesis 7. There is no significant difference between white and non-white student population measurements on the faculty-student interaction variable.

Table 16 contains the results for Hypothesis 7. The computed t-statistic for total campus was 1.386 with white student means of 10.015 and non-white means 9.777. This did not exceed the critical t-statistic at the .05 level. The conclusion was fail to reject Hypothesis 7. There is no difference between white and non-white students score on the faculty-student interaction variable. East Campus, with means of 10.404 for white students and 9.866 for non-white, North Campus, with means of 9.999 for white students and 9.438 for non-white, and West Campus, with means of 9.838 for white students and 10.063 for non-white students, resulted in computed t-statistics of 1.973, 1.731, and -.704 respectively. All three campuses failed to exceed the critical t-statistic for the .05 level; therefore failure to reject Hypothesis 7 was the conclusion for each of the three campuses.

Table 16

Means, S.D., and Computed t-Statistic Comparing White and Non-White Students on the Faculty-Student Interaction Variable

CAMPUS	HYP.	NO.	WHITE STUDENTS		NON-WHITE STUDENTS		df	t
			MEAN	S.D.	MEAN	S.D.		
Total	7	142	10.015	.802	9.777	.499	150	1.386
East	7	34	10.404	.959	9.866	.487	37	1.973
North	7	36	9.999	.648	9.438	.530	37	1.731
West	7	72	9.838	.734	10.063	.433	72	-.704

* $p < .05$

Hypothesis 8. There is no significant difference between male and female student measurements on the social system variable.

Table 17 shows the data summary of Hypothesis 8. The computed t-statistic for the total campus was .353 with males having a mean of 10.102 and females 10.028. East Campus males had a mean of 10.417 and females 10.275, which resulted in a t-statistic of .164. North Campus males had a mean of 9.974 and females 10.078, which resulted in a t-statistic of -.562. West Campus males had a mean of 10.035 and females 9.862, which resulted in a t-statistic of 1.067. In each case the computed t-statistic did not exceed the critical t-statistic at the .05 level. It should be noted that for East Campus the sample size and the within group variances were unequal but not proportional. Under this condition the independent sample t-test tends to be liberal. Even under these liberal conditions the t-statistic for East Campus did not meet the criterion for significance. In each of the four population groups the conclusion was to fail to reject Hypothesis 8. There was no difference between male and female students' scores on the social system variable.

Hypothesis 9. There is no significant difference between male and female student measurements on the peer-group interaction variable.

The results of Hypothesis 9 are presented in Table 18. The computed t-statistic for the total campus was .035, with a

Table 17

Means, S.D., and Computed t-Statistic Comparing Male and Female Students on the Social System Variable

CAMPUS	HYP.	MALE STUDENTS			FEMALE STUDENTS			df	t
		NO.	MEAN	S.D.	NO.	MEAN	S.D.		
Total	8	50	10.102	1.410	102	10.028	.616	150	.353
East	8	11	10.417	2.816	28	10.275	.715	37	.164
North	8	14	9.974	.531	25	10.078	.594	37	-.562
West	8	25	10.035	.723	49	9.862	.518	72	1.067

* $p < .05$

Table 18

Means, S.D., and Computed t-Statistic Comparing Male and Female Students on the Peer-Group Interaction Variable

CAMPUS	HYP.	MALE STUDENTS			FEMALE STUDENTS			df	t
		NO.	MEAN	S.D.	NO.	MEAN	S.D.		
Total	9	50	10.001	.935	102	9.996	.652	150	.035
East	9	11	9.468	.650	28	10.049	.721	37	-2.437*
North	9	14	10.057	.677	25	10.123	.746	37	-.280
West	9	25	10.204	1.088	49	9.900	.552	72	1.312

*p<.05

mean for males of 10.001 and females 9.996, which did not exceed the critical t-statistic at the .05 level. The conclusion was to fail to reject Hypothesis 9. There is no difference between male and female students' scores on the peer-group interaction variable. With means for males of 9.468 and females 10.049, East Campus resulted in a -2.437 computed t-statistic, which was significant at the .05 level in favor of female students. Because the within group variances were approximately equal it was not necessary to consider the difference in sample size. Therefore the null hypothesis was rejected for Hypothesis 9. East Campus female students scored higher than male students on the peer-group interaction variable. North Campus means for males was 10.057 and females 10.123 and West Campus means for males was 10.204 and females 9.900. Both resulted in non-significant results with t-statistics of -.280 and 1.312 respectively. This resulted in a failure to reject decision on these campuses in relationship to Hypothesis 9. There is no difference between male and female students' score on the peer-group interaction variable on the North and West campuses.

Hypothesis 10. There is no significant difference between male and female student measurements on the faculty-student interaction variable.

Table 19 contains the data of Hypothesis 10. The computed t-statistic for the total campus was -1.372 with means for males 9.883 and females 10.056. This did not exceed the critical t-statistic at the .05 level; therefore the decision was fail to

Table 19

Means, S.D., and Computed t-Statistic Comparing Male and Female Students on the Faculty-Student Interaction Variable

CAMPUS	HYP.	MALE STUDENTS		FEMALE STUDENTS			t
		NO.	MEAN	S.D.	NO.	MEAN	df
Total	10	50	9.883	.671	102	10.056	150
East	10	11	9.912	.743	28	10.501	37
North	10	14	9.890	.566	25	9.994	37
West	10	25	9.867	.718	49	9.833	72

* $p < .05$

-1.372

-2.056*

-.499

.189

reject Hypothesis 10. There was no difference between male and female students' scores on the faculty-student interaction variable. East Campus had a significant computed t-statistic of -2.056, with means for males of 9.912 and females 10.501, in the direction of female students. The decision was to reject the Hypothesis 10. Female students scored higher on the faculty-student interaction variable than male students. North Campus means for males were 9.890 and females 9.994 and West Campus means were 9.867 for males and 9.833 for females. Both resulted in a fail to reject decision for Hypothesis 10, with computed t-statistics of -.499 and .189 respectively.

Hypothesis 11. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the social system variable.

Table 20 presents the results of Hypothesis 11. The computed t-statistic for total campus was .098, with means of 10.061 for students with the course and 10.047 for student without the course. East Campus t-statistic was -.052, with means of 10.300 for students with the course and 10.324 for students without the course. The test of Hypothesis 11, for both total and East campuses, failed to exceed the critical t-statistic at the .05 level and concluded in decisions of fail to reject Hypothesis 11. The computed t-statistic for the North Campus was -2.67, with means of 9.787 for students with the course and 10.237 for students without the course. West Campus

Table 20

Means, S.D., and Computed t-Statistic Comparing Students Who Have Had a Human Relations Type Course With Students Who Have Not on the Social System Variable

CAMPUS	HYP.	HUMAN RELATIONS COURSE		NO HUMAN RELATIONS COURSE		df	t
		NO.	MEAN	S.D.	NO.	MEAN	S.D.
Total	11	59	10.061	.706	93	10.047	1.079
						150	.098
East	11	15	10.300	.982	24	10.324	1.869
						37	-.052
North	11	17	9.787	.502	22	10.237	.546
						37	-2.670*
West	11	27	10.102	.594	47	9.817	.578
						72	2.000*

*p<.05

computed t-statistic was 2.00, with means of 10.102 for students with the course and 9.817 for students without the course. The test of Hypothesis 11, for both North and West campuses, exceeded the critical t-statistic at the .05 level of significance. The decision was to reject Hypothesis 11. North Campus students who had not had a human relations course scored higher than students who had the course on the social system variable. West Campus students who had had a human relations course scored higher than students who did not have the course.

Hypothesis 12. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the peer-group interaction variable.

Table 21 presents the results for Hypothesis 12. As indicated, the computed t-statistic for total campus equalled .419, with means of 10.031 for students with the course and 9.976 for students without the course. East Campus had a t-statistic of 1.108 and means of 10.067 for students with the course and 9.771 for students without the course. West Campus had a t-statistic of 1.215, with means of 10.162 with the course and 9.912 for students without the course.

The test of Hypothesis 12, in each of the three groups, failed to exceed the critical t-statistic at the .05 level. The decision for all three was fail to reject Hypothesis 12. There was no difference between students who had a human relations course and students who had not on the peer-group interaction

Table 21

Means, S.D., and Computed t-Statistic Comparing Students Who Have Had a Human Relations Type Course With Students Who Have Not on the Peer-Group Interaction Variable

CAMPUS	HYP.	HUMAN RELATIONS COURSE		NO HUMAN RELATIONS COURSE		df	t
		NO.	MEAN	S.D.	NO.	MEAN	S.D.
Total	12	59	10.031	.842	93	9.976	.696
							.419
East	12	15	10.067	.920	24	9.771	.599
							1.108
North	12	17	9.792	.548	22	10.337	.746
							-2.628*
West	12	27	10.162	.940	47	9.912	.668
							1.215

* $p < .05$

variable. The North Campus had a computed t-statistic of -2.628, with means of 9.792 for students with the course and 10.337 for students without the course. This exceeded the critical t-statistic at the .05 level in favor of no human relations course and the decision was to reject Hypothesis 12. Students on the North Campus who had not had a human relations course scored higher than students who had the course on the peer-group interaction variable.

Hypothesis 13. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the faculty-student interaction variable.

The results of Hypothesis 13 are found in Table 22. The computed t-statistics for total campus equalled 1.07, East Campus equalled .917, North Campus equalled -1.624, and West Campus equalled 1.781. All four failed to exceed the critical t-statistic at the .05 level of significance. The decision for all four groups was fail to reject Hypothesis 13. There is no difference between students who had a human relations course and students who had not on the faculty-student interaction variable.

Test of Hypotheses 14-19.

All data concerning hypotheses 14-16 are presented in Table 23.

Hypothesis 14. There is no correlation between student semester hours completed and the social system variable.

Table 22

Means, S.D., and Computed t-Statistic Comparing Students Who Have Had a Human Relations Type Course With Students Who Have Not on the Faculty-Student Interaction Variable

CAMPUS	HYP.	HUMAN RELATIONS COURSE		NO HUMAN RELATIONS COURSE		df	t
		NO.	MEAN	S.D.	NO.	MEAN	
Total	13	59	10.089	.893	93	9.942	1.070
East	13	15	10.534	1.274	24	10.211	.917
North	13	17	9.773	.559	22	10.099	-.624
West	13	27	10.042	.729	47	9.731	1.781

* $p < .05$

Table 23

Correlation Coefficients for Accumulated Semester Hours and
Social System, Peer-Group Interaction, and Faculty-Student
Interaction Variables by Campus

	TOTAL	EAST	NORTH	WEST
HYPOTHESIS 14 accumulated semester hours and social system	-.093	-.162	-.184	.030
HYPOTHESIS 15 accumulated semester hours and peer-group interaction	-.038	-.083	-.106	.012
HYPOTHESIS 16 accumulated semester hours and faculty-student interaction	.004	.054	-.106	.062

* $p < .05$

Total campus had a $-.093$ correlation coefficient which was not significant at the $.05$ level. East Campus, North Campus, and West Campus recorded coefficients of $-.162$, $-.184$, and $.030$ respectively. None of these were significant at the $.05$ level. The decision in all four groups was fail to reject Hypothesis 14. There is no correlation between student semester hours and the social system variable.

Hypothesis 15. There is no correlation between student semester hours completed and the peer-group interaction variable.

The correlation coefficients for total campus was $-.038$, East Campus $-.083$, North Campus $-.106$, and West Campus $.012$. All of these groups resulted in a failure to reject decision for Hypothesis 15, since they were not significant at the $.05$.

Hypothesis 16. There is no correlation between student semester hours completed and the faculty-student interaction variable.

The total campus correlation coefficient of $.004$ was not significant at the $.05$ level, therefore resulting in a failure to reject decision for Hypothesis 16. Each of the individual campuses also resulted in the same decision by recording correlation coefficients for East $.054$, North $-.106$, and West $.062$. There is no correlation between student semester hours completed and the faculty-student interaction variable.

All data concerning hypotheses 17-19 are presented on table 24.

Table 24

Correlation Coefficients for Age and Social System, Peer-Group Interaction, and Faculty-Student Interaction Variables by Campus

	TOTAL	EAST	NORTH	WEST
HYPOTHESIS 17 age and social system	-.048	-.058	-.019	.014
HYPOTHESIS 18 age and peer-group interaction	.008	-.149	-.014	.034
HYPOTHESIS 19 age and faculty-student interaction	-.047	.079	-.034	-.022

* $p < .05$

Hypothesis 17. There is no correlation between student age and the social system variable.

All four hypotheses were found to be non-significant at the .05 level. Coefficients for total campus $-.048$, for East $-.058$, for North $-.019$, and for West $.014$ resulted in a failure to reject decision for Hypothesis 17. There is no correlation between students' age and the social system variable.

Hypothesis 18. There is no correlation between student age and peer-group interaction.

Correlation coefficients recorded were total campus $.008$, East $-.149$, North $.014$, and West $.034$. None of these were found to be significant at the .05 level and therefore a fail to reject decision was made for Hypothesis 18. There is no correlation between students' age and the peer-group interaction variable.

Hypothesis 19. There is no correlation between student age and faculty-student interaction variable.

As a result of the correlation coefficients recorded by the different campuses, total $-.047$, East $.079$, North $-.034$, and West $-.022$, a decision of fail to reject Hypothesis 19 was made. None of the four correlation coefficients were found to be significant at the .05 level. There is no correlation between students' age and the faculty-student interaction variable.

ANOVA Between Campuses

When the dependent variable was students' actual dropout rate, East and North campuses showed significance on Hypotheses

2 and 3 whereas West Campus did not. In order to determine which variables differed on the separate campuses an ANOVA was used. Table 25 presents the results of the ANOVA and Table 26 continued the analysis by presenting the Bonferroni confidence intervals for all pairwise contrast.

Only one variable differed significantly at the .05 across campuses. Faculty-student interaction with, means of 10.335 for East Campus , 9.957 for North Campus, and 9.844 for West Campus, recorded an F-statistic of 5.260. There was a significant difference between campuses on the faculty-student interaction variable. Further analysis indicated that the East Campus students, mean 10.335, scored significantly higher on the faculty-student interaction variable than West Campus students, mean 9.844, with Bonferroni limits of (.14341,.83645).

Summary of the Chapter

This chapter contains the findings of the study. Completed and usable responses were received from 152 students which resulted in a 76 percent response rate. These sample subjects were found to be very similar to the total population in reference to demographic variables obtained from the Registrar.

Ultimately 92 test of hypotheses were analyzed. Each of the 19 original hypotheses were tested with reference to four different populations, i.e., total campus, East Campus, North Campus, and West Campus. Hypotheses 1-4 were tested again using a different dependent variable.

Table 25

ANOVA Between East, North, and West Campuses on Variables of Interest

Variables	df	F
Age	2/149	2.639
Sex	2/149	.283
Race	2/149	2.200
Hours enrolled	2/149	2.415
Accumulated hours	2/149	2.496
Background Characteristics	2/149	2.806
family background	2/149	.674
English/reading	2/149	3.817
Commitment	2/149	1.009
goal	2/149	.725
institution	2/149	.234
Academic System	2/149	.745
Social System	2/149	2.260
peer-group interaction	2/149	.793
qualitative (survey items 27-33)	2/149	1.003
quantitative (survey item 40)	2/149	.076
faculty-student interaction	2/149	5.260*
qualitative (survey items 34-38)	2/149	3.884
quantitative (survey item 39)	2/149	2.347
Perception of Dropout Decision	2/149	.208
Actual Dropout Decision	2/149	.378
Completion of Human Relations Course	2/149	.268

* $p < .05$

Table 26

Bonferroni Statistics: Faculty-student Interaction on Student Survey Questionnaire

VARIABLE	LIMITS EAST/NORTH	LIMITS EAST/WEST	LIMITS NORTH/WEST
FACULTY- STUDENT INTERACTION	(-.0144,.7710)	*(.1434,.8365)	(-.2344,.4586)

* $p < .05$

Of the 32 hypotheses analyzed for Hypotheses 1-4, each hypotheses being tested in reference to the four different groups using two different dependent variables, only four were found to be significant at the .05 level. All four significant hypotheses involved East and North campuses and were in reference to the actual drop out rate as the dependent variable. Of the remaining 60 hypotheses, Hypotheses 5-19, each being tested in reference to four different groups, only six were found to be significant at the .05 level. Three of the six involved East Campus students, one involved North Campus students, and two involved West Campus students.

Considering all variables of interest, the similarities between campuses were greater than the differences. The one major exception was faculty-student interaction. Tinto's conceptual framework seemed to be supported, with reference to the faculty-student interaction variable on the East Campus and peer-group interaction variable on the North. This was not the case on the West Campus and all campuses combined.

CHAPTER FIVE

SUMMARY, CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study, conclusions, implications, and recommendations related to the findings.

Summary

The purpose of this study was to determine whether relationships existed between social system integration variables (peer-group interaction and faculty-student interaction) and student dropout decisions in a two-year community college. The investigation was guided by the theory of dropout decisions being a longitudinal process of interactions between the individual student and the academic and social systems of the college, as formulated by Vincent Tinto (1975). Tinto believed that students enter college with certain background characteristics which influence the development of goal and institutional commitments. He believed that these commitments in turn have influence on the academic and social integration of the student into their college environment. Tinto hypothesized that the degree to which students are integrated into a college will have a direct affect on the students' decisions to either drop out or remain in school (Figure 1, p.3).

A Student Survey (Appendix D) was developed for this research. The Student Survey was designed to measure background

characteristics (family background, individual attributes, and pre-college schooling), commitments (goal and institutional), academic system integration, social system integration (peer-group interaction and faculty-student interaction), and students' perceived dropout decisions. In addition, the questionnaire requested the respondent to identify his/her sex, age, race, and whether or not he/she had taken a human relations type course.

A pilot study of 40 students was conducted to assess the feasibility of the instrument. Thirty-eight of the 40 subjects responded and the usability of the instrument was varified. The final survey was distributed to 200 students on three different campuses of Pasco Hernando Community College. The response rate was 76 percent with 152 subjects being used for the final analysis.

Multiple linear regression was used to test the first four of the 19 hypotheses. Four separate analyses were performed on each of the four separate groups, i.e., total campus, East Campus, North Campus, and West Campus using two different dependent variables. This resulted in 32 analyses tests involving the first four hypotheses. East Campus and North Campus were the only groups to reach significance at the .05 level for both Hypotheses 2 and 3. In all four situations the dependent variable was actual dropout decision. The following

hypotheses were found significant on East Campus and North Campus and resulted in a decision to reject Hypotheses 2 and 3.

Hypothesis 2. A significant proportion of the variation in student dropout rates is not explained by peer-group interaction after controlling for student background characteristics, student commitments, the academic system, and faculty-student interaction.

Students on the North Campus who remained in school scored higher on the peer-group interaction scale than students who withdrew from school. The reverse is true for the East Campus. Students who remained in school scored lower on the peer-group interaction scale than students who withdrew from school.

Hypothesis 3. A significant proportion of the variation in student dropout rates is not explained by faculty-student interaction after controlling for student background characteristics, student commitments, the academic system, and peer-group interaction.

Students on the North Campus who remained in school scored lower on the faculty-student interaction scale than students who withdrew. The reverse is true for the East Campus. Students who remained in school scored higher on the faculty-student interaction scale than students who withdrew from school.

A t-test statistic was used to analyze Hypotheses 5-13. The following hypotheses were found to be significant at the .05

level for the East Campus only, resulting in a decision to reject the hypothesis on this campus.

Hypothesis 5. There is no significant difference between white and non-white student population measurements on the social system variable.

East Campus white students scored higher on the social integration variable than did the non-white students.

Hypothesis 9. There is no significant difference between male and female student measurements on the peer-group interaction variable.

Female students scored higher than male students on the peer-group interaction variable.

Hypothesis 10. There is no significant difference between male and female measurements on the faculty-student interaction variable.

Female students scored higher than male students on the faculty-student interaction variable.

The following hypothesis was found to be significant at the .05 level for both the North and West campuses, resulting in a decision to reject the hypothesis on these campuses.

Hypothesis 11. There is no significant difference between students who have taken a human relations type course and students who have not on student measurements of the social system variable.

North Campus students who had not had a human relations course scored higher than students who had the course on the social system variable. West Campus students who had had a human relations course scored higher than students who did not have the course.

The following hypothesis was found to be significant at the .05 level for the North Campus only, resulting in a decision to reject the hypothesis for this campus.

Hypothesis 12. There is no significant difference between students who have taken a human relation type course and students who have not on student measurements of the peer-group interaction variable.

Students on the North Campus who had not had a human relations course scored higher than students who had the course on the peer-group interaction variable.

All other hypotheses not reported here were found to be non-significant at the .05 level. These results partially supported the specified model under study.

When considering the results of this study, certain limitations in regard to their generalizability should be kept in mind. One limitation was the issue of student volunteers. Even though 76 percent of the student sample completed the questionnaire, there is the possibility that these respondents differed from the non-respondents. This limitation was lessened

because of the similarities found, in regard to demographic variables, between the student sample and the total college student population.

Another limitation was that the sample was drawn from one multi-campus community college. Since the research involved just one particular community college, generalizations to other institutions would be restricted. In addition the small sample size on each campus may limit the validity of some of the statistical analysis.

Conclusion

The first conclusion drawn from this study was the need for a second dependent variable. Even though perception of a student's decision to drop out may be a good indicator of real performance in some situations, this study did not confirm this fact. With 53.4 percent of the sample changing their decisions from what they perceived to what actually was done, it was apparent that actual dropout decision was the more accurate measure of the dropout decisions.

The correlational data (Tables 2,3,4, and 5) indicated relationships that occurred within the total campus, the East Campus, the North Campus, and the West Campus students. In synthesizing the data, relationships were found that were common to all groups, some common to three groups, a few common to just two groups, and several that were unique to individual campuses. Some general conclusions and trends are reported here concerning variables of major interest.

Background characteristics had a positive correlation with accumulated hours in the total campus and West Campus groups. Also the higher the background characteristics in these two groups the less likely the students were to actually drop out. The higher the background characteristics for West Campus students the higher the academic integration. These data gave some support for the notion that background characteristics play a role in the student's dropout decision process.

There was a positive correlation between commitments and academic integration in all groups except on the North Campus. In addition, females appeared more committed to college completion on the total and West campuses. West Campus students' responses showed a positive relationship between their commitment and their peer-group interaction and social system integration. There was the same indication that commitment was related to academic integration, accumulated credit hours, and possibly peer-group and faculty-student interaction.

Academic integration was positively correlated with both social system integration and faculty-student interaction for all student groups except on the East Campus. For two groups, total and West, the older student was more academically integrated. Even though the East Campus was not included, academic integration on East Campus indicated that the student would be less likely to withdraw from school. These trends lend support to social system integration and academic system integration

being related in Tinto's conceptual model and the dropout decision.

It was apparent that a positive relationship existed between social system integration and its components, peer-group interaction and faculty-student interaction. This relationship was significant at the .05 level for all four student campus groups. This association was also true for peer-group interaction and faculty-student interaction. In addition, the variables of faculty-student interaction and social system integration were positively related to academic integration in all groups except on the East Campus. This information was expected and provided support for the inclusion of peer-group and faculty-student interaction as components of social system integration.

When considering actual dropout rates, only two variables had significant correlations at the .05 level. In reference to the total campus and West Campus, the higher one's background characteristics the less likely one was to withdraw. With East Campus students, the higher the student's academic integration the more likely the student was to persist. Both of these variables, student background characteristics and academic integration, have been sighted as relating directly or indirectly to persistence and withdrawal.

From the analysis of the correlational data, it would appear that the conceptual framework model by Tinto does comprise variables that relate to each other as theorized. These

correlations partially supported relationships, but they are not presented here to imply any path or causal relationships. The data presented here were for background information and were not intended to varify the validity of Tinto's model.

In the present study, the results of multiple linear regression indicated that social integration, peer-group interaction, and faculty-student interaction did not significantly affect the perceived dropout decision in any of the four student groups. Interaction effects between peer-group interaction and faculty-student interaction were also found to be non-significant. This was also the case in reference to the actual student dropout decision on the total campus and West Campus. East Campus and North Campus showed a statistically significant association between the variables of peer-group interaction and faculty-student interaction and the actual dropout decision. These last results are partially supportive of Tinto's conceptual model. Tinto hypothesized that social system integration, comprised of peer-group interaction and faculty-student interaction, has a direct and significant influence on the student dropout decision.

The previous results indicating no significance between social system variables and dropout rate were more supportive of the reconceptualized model of Tintos' model suggested by Pascarella, Duby, and Iverson (1983) and Terenzini, Pascarella, Theophilides, and Lorang (1983). This model hypothesized that the direct effect of social integration on dropout decision was

either non-significant or negative (see Figure 2, p.31). In fact, where the total campus and West Campus data showed no significant proportion of the variation in dropout rate due to social system integration, the data did indicate that the higher the students' background characteristics were the more likely the student would persist (.05 level).

Table 27 summarizes the results of the 92 test of the 19 hypotheses in this study. Results from the East Campus, with actual dropout rate as the dependent variable, showed a significant proportion (11.2%) of the variation in dropout rate was explained by peer-group interaction (Hypothesis 2) and a significant proportion (8.6%) of the variation in dropout was explained by faculty-student interaction (Hypothesis 3). Students who remain in school scored higher on the faculty-student interaction variable and lower on the peer-group interaction variable than students who withdrew from school.

Students remaining in school with higher faculty-student interaction scores follow Tinto's theory that the higher the integration the more likely a student would remain in school. A possible explanation for the reverse being true for peer-group interaction was offered by Pascarella and Chapman (1983). They concluded that students with high levels of peer-group interaction tend to have high affiliation needs. In an attempt to fulfill these needs students may transfer to other institutions and therefore be considered dropouts.

Table 27

Results of Hypotheses

Hypotheses	<u>Dropout Perception</u>		<u>Actual Dropout</u>	
	F-statistic	Decision	F-statistic	Decision
1. Total	.192	Fail to Reject	.686	Fail to Reject
East	2.569	Fail to Reject	2.651	Fail to Reject
North	.837	Fail to Reject	.009	Fail to Reject
West	.448	Fail to Reject	2.704	Fail to Reject
2. Total	1.420	Fail to Reject	1.333	Fail to Reject
East	.623	Fail to Reject	5.558*	Reject
North	1.551	Fail to Reject	4.728*	Reject
West	1.037	Fail to Reject	2.773	Fail to Reject
3. Total	.268	Fail to Reject	.002	Fail to Reject
East	.978	Fail to Reject	4.253*	Reject
North	.192	Fail to Reject	7.284*	Reject
West	.031	Fail to Reject	.356	Fail to Reject
4. Total	.001	Fail to Reject	.522	Fail to Reject
East	.137	Fail to Reject	.298	Fail to Reject
North	.357	Fail to Reject	2.232	Fail to Reject
West	.327	Fail to Reject	.107	Fail to Reject
t-statistic				
5. Total	1.942	Fail to Reject		
East	2.134*	Reject		
North	.714	Fail to Reject		
West	.014	Fail to Reject		
6. Total	1.336	Fail to Reject		
East	1.796	Fail to Reject		
North	.045	Fail to Reject		
West	.394	Fail to Reject		
7. Total	1.386	Fail to Reject		
East	1.973	Fail to Reject		
North	1.731	Fail to Reject		
West	-.704	Fail to Reject		

(continued)

* $p < .05$

Table 27-continued

Hypotheses	t-statistic	Decision
8. Total	.353	Fail to Reject
East	.164	Fail to Reject
North	-.562	Fail to Reject
West	1.067	Fail to Reject
9. Total	.035	Fail to Reject
East	-2.437*	Reject
North	-.280	Fail to Reject
West	1.312	Fail to Reject
10. Total	-1.372	Fail to Reject
East	-2.056*	Reject
North	-.499	Fail to Reject
West	.189	Fail to Reject
11. Total	.098	Fail to Reject
East	-.052	Fail to Reject
North	-2.670*	Reject
West	2.000*	Reject
12. Total	.419	Fail to Reject
East	1.108	Fail to Reject
North	-2.628*	Reject
West	1.215	Fail to Reject
13. Total	1.070	Fail to Reject
East	.917	Fail to Reject
North	-1.624	Fail to Reject
West	1.781	Fail to Reject

(continued)

* $p < .05$

Table 27-continued

HYPOTHESES	CORRELATION	DECISION
<hr/>		
14. Total	- .093	Fail to Reject
East	- .162	Fail to Reject
North	- .184	Fail to Reject
West	.030	Fail to Reject
15. Total	- .038	Fail to Reject
East	- .083	Fail to Reject
North	- .106	Fail to Reject
West	.012	Fail to Reject
16. Total	.004	Fail to Reject
East	.054	Fail to Reject
North	- .106	Fail to Reject
West	.062	Fail to Reject
17. Total	- .048	Fail to Reject
East	- .058	Fail to Reject
North	- .019	Fail to Reject
West	.014	Fail to Reject
18. Total	.008	Fail to Reject
East	- .149	Fail to Reject
North	- .014	Fail to Reject
West	.034	Fail to Reject
19. Total	- .047	Fail to Reject
East	.079	Fail to Reject
North	- .034	Fail to Reject
West	- .022	Fail to Reject

* $p < .05$

Other results from the East Campus indicated that white students scored significantly higher ($t=2.134$) on the measurement of the social system variable than non-white students (Hypothesis 5). Female students scored significantly higher ($t=-2.437$) on the measurement of the peer-group interaction variable than males (Hypothesis 9). And females scored significantly higher ($t=-2.056$) on the measurement of the faculty-student variable than males (Hypothesis 10). The white student population comprises 87.2 percent of the East Campus population. Even though the non-white population was 12.8 percent, in reality there were only five non-white subjects. This small number may not be representative of the total population of non-white students, therefore partially explaining the difference. The difference may also be very real in the respect that non-white students, being a minority, either do not make the effort, lack the social skills, or are not given adequate opportunities to socially integrate into the college environment.

Females on the East Campus ultimately felt more positive interaction with their peers than males. This could partially be due to the more than two to one ratio of female students to male students on the East Campus. East Campus had the highest percent of female students, of the three campuses, with an actual 65 percent of the students being female. Females may be given more opportunities to interact with their peers because of the make-up of the East Campus's social and extracurricular activities. It is also possible that females may possess more adequate social

interaction skills that allow them to interact more successfully. Females also expressed a higher degree of faculty-student interaction than males. Part of the explanation, for this last finding, might be due to the fact that females perceived themselves as persisting in school more than males. This relationship might reinforce interaction with faculty members. It is possible that the same social interaction skills that may promote a higher degree of interaction with peers may also be advantageous to social interaction with faculty. Similar findings have been reported by Spady (1965), where a higher degree of social integration was found for females (20 percent) as compared to males (12 percent).

Results from the North Campus, with actual dropout rate as the dependent variable, indicated a significant proportion (10.9%) of the variation in dropout rate was explained by peer-group interaction (Hypothesis 2) and a significant proportion (16.7%) of the variation in dropout rate was explained by faculty-student interaction (Hypothesis 3). Students who remain in school scored higher on the peer-group interaction variable and lower on the faculty-student interaction variable than students who withdrew from school.

Students remaining in school with higher peer-group interaction scores follows Tinto's theory that the higher the peer-group interaction the more likely a student will remain in school. It is somewhat difficult to explain the discrepancy between peer-group interaction having a positive influence and

faculty-student interaction having a negative influence on dropout decision. A possible explanation is that the North Campus has the lowest number of full time faculty of the three campuses. This results in a large number of students being taught by part-time instructors. This fact may restrict the amount of faculty-student interaction that occurs. As a result students who remain in school may have adequate peer-group interaction but lack the opportunity for faculty-student interaction.

North Campus results indicated that students who do not take a human relations type course scored significantly higher ($t=-2.670$) than students who do take the course, on the social system variable scale (Hypothesis 11). These same students scored significantly higher ($t=-2.628$) on the measurement of the peer-group interaction variable (Hypothesis 12). One possible explanation for this finding may be that human relations type courses provide some social and/or peer interaction that traditional community college settings do not provide. Since North Campus had the highest percent of students over 32 years of age, 23 percent, these students might not feel as great of a need to socially interact as the younger students, therefore avoiding the course. The younger students may seek the course to fulfill some social interaction needs.

West Campus results indicated that students who do take a human relations type course scored significantly higher ($t=2.00$) on the social system variable scale, than students who do not

take the course (Hypothesis 11). These results are in line with several authors who have indicated that human relations type courses are advantageous to social integration (Meyer, 1975; Wall, 1979; & Beck, 1980). There is some difficulty in explaining why on the West Campus, human relations type courses were related to social integration in a positive direction, on the North Campus related in a negative direction, and on the East Campus there was no significant relationship. The only real significant student difference between campuses was the faculty-student interaction variable.

East Campus students scored significantly higher on the faculty-student interaction ($p < .05$) than West campus students. This difference between campuses was of interest because faculty-student interaction was a component of the social system integration variable. The difference between faculty-student interaction between campuses involved the whole faculty body not just the instructors of human relations type courses. Therefore, it would be wrong to place too much emphasis on human relations instructors as an influence on the faculty-student interaction on any given campus. Even though there may be implications drawn from these differences in social systems and human relations type course offerings, it would be inappropriate to assume human relations type courses caused these differences in campus social system.

This study does partially confirm Tinto's (1975) conceptual framework model for dropout decisions. East Campus, with

significant results in relationship to Hypothesis 3 and North Campus, with significant results in relationship to Hypothesis 2 certainly demonstrated a direct and positive relationship between the variables faculty-student interaction and peer-group interaction respectively and the student's decision to drop out. It is important to note that even though these results supported Tinto's model, the negative influence of peer-group interaction on the East Campus and the faculty-student interaction on the North Campus tended to support the reconceptualized model.

Other relationships, in Tinto's model, that existed to some extent were the academic system variable correlated at a significant level with the dropout decision variable ($p < .05$), and the variable commitments with the academic system variable ($p < .05$). There were other variable relationships notably missing, i.e., background characteristics with commitments, commitments with social system, and academic system with social system. It should be noted that two of these relationships in Tinto's model, missing from East Campus, existed on other campuses. West Campus showed a positive correlation between commitment and social system variable at the .05 level of significance. Total, North, and West campuses, all recorded positive correlations, significant at the .05 level, between the academic system and social system variables. These concluding remarks are not meant to imply path relations that might result from path analysis, their inclusion is to imply that an exact fit of Tinto's model to the East Campus was not achieved.

Implications

The purpose of this research was to use Tinto's (1975) conceptual framework model of student retention to determine what relationships exist between social system integration variables (peer-group interaction and faculty-student interaction variables) and student dropout decisions in a two-year, community college. The model was partially verified by two of the four population groups under study. East and North campuses, of Pasco-Hernando Community College, did follow the general longitudinal process of dropout decision promoted by Tinto in reference to peer-group interaction by the North Campus, and faculty-student interaction by the East Campus with a direct and positive influence on the student's decision to drop out of school. This finding showed that Tinto's model may be partially useful in connection with studying the dropout process of community college students.

The results in the study were consistent with other findings (Pascarella & Terenzini, 1983) with the exception that PHCC is a commuter school and other studies verifying Tinto's model were residential. Terenzini, Pascarella, Theophilides, and Lorang (1983) verified the social system's negative influence on persistence in residential schools which was also found in the East Campus for peer-group interaction and the North Campus for faculty-student interaction. In considering the validity of Tinto's model in residential or commuter schools, Pascarella and Chapman (1983) studied three different types of institutional

settings: four-year residential institutions, four-year commuter institutions, and two-year commuter institutions. In the residential school, social integration was found to have a direct effect on college persistence and no direct effect in either of the commuter schools. This was also the findings in this study. This lack of effect was possibly attributed to the institutional setting or the difference in commuter students and residential students. Commuter students generally spend less time on campus and have environments that were less rich in terms of social integration opportunities than residential institutions (Chickering, 1974). Another possible explanation for this lack of effect was that students with high level social integration tend to have high affiliation needs. Community College students may be more sensitive to the lack of opportunity for social interaction in commuter colleges and either transfer to residential schools or withdraw (Pascarella & Chapman, 1983). Astin (1973) and Chickering (1974) suggested that the commuter student may be a different type all together than the residential student and these differences may be an important factor effecting patterns of variables involved in the retention process. An additional explanation might be that the low dropout rate represented an insufficient number of subjects to allow for complete analysis.

From these findings a reconceptualization of Tinto's model was suggested by Pascarella, Duby, and Iverson (1983) and Terenzini, Pascarella, Theophilides, and Lorang (1983). This

model was suggested as a more adequate model to be utilized by commuter schools than Tinto's original conceptual model. This revised model promotes background characteristic variables as having greater influence on student persistence in commuter schools than social integration and social integration having no significant direct effect or a negative effect. This reconceptualized model appeared more adequate for West Campus and possibly the total campus since social integration had no direct influence on dropout decisions in either population group. Special consideration would have to be given to the East and North campuses, for their characteristics favoring residential schools, if the reconceptualized model was applied to the total campus.

The main implications of this study centered around the main concepts implied by earlier research. First, there may be one model of the dropout process that applies to residential schools and one model that applies to commuter schools and second, these models are more or less complete in their variable relationships in reference to the two different institutional settings. The results of this study showed that within a single commuter school, there may be individual campuses that are more characteristic of residential schools. Specifically, Tinto's model may be more applicable to the East and North campuses of PHCC, with their direct relationship between faculty-student interaction and peer-group interaction, whereas the reconceptualized model may be more applicable to the West

Campus. Even when applying Tinto's model or the reconceptualized model to the appropriate campuses, the general process seems to fit but not all of the relative variables act as theorized. The strongest implication of this study is that there may not be any serious flaws in either model, but rather in the inclusive manner in which the models are applied. Both models may be very useful in explaining the dropout process in educational institutions. The flaw suggested by research was that Tinto's model was applied to all institutional settings, therefore the need for a reconceptualized model. Pascarella, Duby, and Iverson (1983) and Terenzini, Pascarella, Theophilides, and Lorang (1983) may have promoted the same error in suggesting that the reconceptualized model would apply to all commuter schools. This research implies that the model, its process and variable relations, cannot be applied across any one type of institutional setting without careful consideration of the institution and its student population characteristics. Within certain residential schools there may exist retention variable relationship more characteristic of typical commuter school and as shown in this study, within a particular commuter school there may be individual campuses that are more similar to residential colleges in their retention variable relationships.

Possibly the most important implication of this study is the philosophy of the purpose for the development of such retention models. Retention models designed to assist institutions to better understand variables relative to the

dropout process should be flexible enough to adjust to the needs and characteristics of individual institutions. There should not necessarily be an extensive effort to adopt a retention model that will necessitate institutions to adjust their natural academic and social systems to accomodate any particular model or exclude portions of their organizational processes in need of attention.

Recommendations for Further Research

As a result of this study several recommendations for future research are in order. These recommendations involve four main areas, individual variables involved in the dropout process, models developed concerning the dropout process, improvement in methodology techniques, and application of these models to retention programs.

The variables involved in the dropout process appeared to be well defined and labeled. Most researchers agree on the variables related to students who drop out and there seems to be some concensus on how to measure these variables. One recommendation of this study is that further attempts should be made to better define and/or measure these variables to better characterizes individual differences. Presently, research is able to describe the typical dropout but lacks the ability to isolate characteristics that may be unique to particular individuals. These individual differences may be so great that the task suggested is beyond the means available to researchers today.

A second recommendation concerns the models that are theorized to explain dropout decisions. The models presently in existence are the result of a considerable amount of research and provide very useful information for practioners and educational researchers. Further research should expand these models, not only into other reconceptualized models, but also into more flexible applications, such as isolating parts of the models and developing ways to utilize the parts separately as well as the whole. Researchers should be concerned with what particular parts of the models are useful in particular settings and which ones can be modified to better fit the unique institutional settings or needs.

A third recommendation concerns the methodology. Consideration should be given to the sample size of the population under study. If each campus, of a multi-campus population, is to be analyzed then a larger sample size should be drawn for each individual campus. In addition possible attention should be given to the total dropout rate of 40% not just degree seeking students.

A final recommendation, and possibly the most important one, concerns the application of retention models to individual institutional settings. Just as there is not one instructional method that should be applied to all students, and one curriculum that fulfills the needs of all institutions, there should not be one isolated retention plan utilized to retain all potential dropouts in any one institution. A strong recommendation of this

research is to investigate all the possible variables involved in retaining students and then consider the uniqueness of the institution and its population in developing more appropriate retention models and practices. Further research should be developed that will assist institutions in developing their own needs assessments in regards to retention and in applying retention concepts to achieve greater student retention.

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APPENDIX A
PROGRAM DECLARATION

PASCO-HERNANDO COMMUNITY COLLEGE
PROGRAM DECLARATION

NAME: _____ DATE: _____

1. I have applied for admission/have been admitted to Pasco-Hernando Community College and wish to pursue the following degree/certificate program (circle one).

- a. Associate in Arts Degree
- b. Associate in Science Degree
- c. Associate in Science Certificate
- d. Undecided
- e. Other Personal Objectives
- f. Vocational Certificate

2. The basis on which I am requesting to be accepted to the Program I have selected above is (circle all that apply).

- a. High school graduate
- b. Received Certificate of Attendance from Florida high school.
- c. Completed GED test
- d. Transferred from other college or university
- e. Early Admission/Credit Bank
- f. Over 19 years of age, but not 2a, 2b, or 2c above.

3. The Federal and State governments require the college to collect the following information.

I have a physical handicap	yes	no
I have a mental handicap	yes	no
I speak English well	yes	no
I read English well	yes	no

I understand that my enrollment in the indicated Program is tentative until all required documents are received by the Records Office, and that my Program will be changed to "Undecided" should these documents not be received by the end of my first semester. I understand further that my program status will be printed on fee invoice and semester grade report, and that to change this Program I must submit a Change of Program Form.

STUDENT'S SIGNATURE: _____ DATE: _____

COUNSELOR'S SIGNATURE: _____ DATE: _____

APPENDIX B

WRITTEN ENGLISH EXPRESSION
PLACEMENT TEST

WRITTEN ENGLISH

Part 1

Directions: In each of the following sentences find out what is wrong, if anything. In deciding whether there is something wrong with the sentence, consider the way a sentence should be written in standard written English, the kind of English usually found in textbooks. Remember that standard written English is sometimes different from conversational English.

Some sentences are acceptable without change.
No sentence contains more than one error.

If the sentence has an error, you will find the error is underlined and lettered. Assume that all other parts of the sentence are acceptable and cannot be changed.

When you find an error, select the one underlined part that must be changed in order to make the sentence acceptable, and put an X in the corresponding blank on the answer sheet.

If there is no error, mark D.

Sample Questions

1. Tom ate the hamburger, which
A
was piled high with onions, it was
B C
good. No error
D

2. Next week Mrs. Wilson has visted
A
her sister in Chicago. No error
B C D

Sample Answers

1. A__B__C__D__

2. A__B__C__D__

You will have 10 minutes to work on the 20 questions in Part 1.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO
(OR, IF SELF-ADMINISTERED,
UNTIL YOU HAVE BEGUN TO TIME YOURSELF)

WRITTEN ENGLISH EXPRESSION

Part 1

Time-10 minutes

20 Questions

1. In 1968 Julian Bond could not accept the vice-presidential

A

nomination he was too young to qualify for the position. No

B
C

error

D
2. The strike came at a time where the public supported efforts

A

to improve the lot of the farm workers. No error

B
C
D
3. If one wants to prepare drawings for an engineer, they must

A
B
C

work with accuracy and precision. No error

D
4. Like many other young boys, Samuel likes both playing

A

football and he watches games on television. No error

B
C
D
5. Nathan was scarce more interested in hiking than he was in

A
B

poetry. No error

C
D
6. Montoya's latest photographs show with great clarity the joy

A
B

that adopting a baby brings. No error

C
D
7. Because General MacArthur and General Eisenhower were the
Allied commanders, we studied that general's strategy in history

A
B
C

class. No error

D

GO ON TO THE NEXT PAGE

8. There is a great many people in the United States who do not
A B
have enough to eat each day. No error
C D
9. The new film will show the different kinds of Indian arts and
A B
crafts produced in North America. No error
C D
10. Like other trucks, James must sometimes drive his
A B
tractor-trailer through the night to reach his destination on
C
time. No error
D
11. Rita Moreno appeared in a television commercial informing
A B
people of their civil rights. No error
C D
12. Some nurses will not work for doctors in private practice,
A
and they will work in community health programs. No error
B C D
13. At the end of the meeting, Clara announced formerly that she
A B
was resigning as president. No error
C D
14. The black judges meeting in Atlanta talked of possible ways
A
of securing justice for black people under a judicial system
B C
dominated by whites. No error
D
15. One of the dangers to young children comes from their
A B
attitude of eating chips of lead paint from the walls. No error
C D

GO ON TO THE NEXT PAGE

16. Trying to understand the formula is as difficult as
A B
Einstein. No error
C D
17. The researchers hope to use the armadillo to help them study
A
leprosy, which until now can be studied only in humans. No error
B C D
18. The Quinault tribe finally closed the land to vacationers,
A B
they had defaced sacred rocks with spray paint and left tons of
C
litter on the beaches. No error
D
19. Waste poured into the upper reaches of the Susquehanna has
A
begun to pollute that river. No error
B C D
20. Leroy enjoyed installing air-conditioning equipment more
A
than repairing them. No error
B C D

STOP

IF YOU FINISH BEFORE TIME IS UP, CHECK YOUR WORK ON THIS PART ONLY. DO NOT GO ON TO PART 2 OF THIS TEST UNTIL YOU ARE TOLD.

WRITTEN ENGLISH EXPRESSION

Part 2

Directions: In each of the following sentences some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find four ways of writing the underlined part. The first of these repeats the underlined part in the original sentence, but the other three are all different. If you think the original sentence is better than any of the suggested changes, you should choose answer A; otherwise you should mark one of the other choices. Select the best answer and put an X in the corresponding answer blank.

In choosing your answers, follow the requirements of standard written English, the kind of English usually found in textbooks. Remember that standard written English is sometimes different from conversational English. Pay attention to how clearly ideas are expressed, whether the words convey the meaning they are supposed to convey, and how the sentence is constructed and punctuated. Choose the answer that produces the most effective sentence—clear and exact, without awkwardness or ambiguity. Do not make a choice that changes the meaning of the original sentence.

Sample QuestionsSample Answers

1. Charoline is studying because she has always wanted to become it. A__B__C__D__
A. it
B. one of them
C. a singer
D. one in signing
2. Because Mr. Thomas was angry, he spoke in a loud voice. A__B__C__D__
A. he spoke
B. and speaking
C. and he speaks
D. as he spoke

You will have 15 minutes to work on the 20 questions in Part 2.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO
(OR, IF SELF-ADMINISTERED, UNTIL
YOU HAVE BEGUN TO TIME YOURSELF)

WRITTEN ENGLISH EXPRESSION

Part 2

Time-15 minutes

20 Questions

21. Maria especially disliked winters in New York and her tenement apartment had little heat.
- A. York and
 - B. York because
 - C. York, while
 - D. York, insofar as
22. Senator Brooks became ill just before the lecture, he had to cancel it.
- A. lecture, he had to cancel
 - B. lecture, so canceling
 - C. lecture, and he had to cancel
 - D. lecture and having to cancel
23. Mary Well's version of "My Guy" is my most favorite one that I like best.
- A. my most favorite one that I like best
 - B. my favorite one that I like best
 - C. my most favorite
 - D. my favorite
24. Howard seemed wiser than his brother's plan, which was very foolish.
- A. than his brother's plan, which was very foolish
 - B. than the very foolish plan of his brother
 - C. than his brother, whose plan was very foolish
 - D. than his brother and his very foolish plan
25. Because the girls admire James Taylor, they had almost listened to every one of his recordings.
- A. had almost listened to
 - B. had listened to almost
 - C. have almost listened to
 - D. have listened to almost

GO ON TO THE NEXT PAGE

26. Surprisingly enough, some of the young people in Tulsa have been meeting in storm sewers to play their guitars.
- A. Tulsa have been meeting in storm sewers to play
 - B. Tulsa, who have been meeting in storm sewers, where they play
 - C. Tulsa, have been meeting in storm sewers, there they play
 - D. Tulsa, meeting in storm sewers and playing
27. The whale and the porpoise are an unusual mammal, for they live in the sea.
- A. an unusual mammal, for they live
 - B. unusual mammals, for they live
 - C. an unusual mammal, living
 - D. unusual mammals, which lives
28. Wanting a better job, it seemed to Joseph continuing his education is the best way to do it.
- A. Wanting a better job, it seemed to Joseph continuing his education is the best way to do it.
 - B. Because he wanted a better job, Joseph thought the best way to do it was to continue his education.
 - C. Joseph thought that the best was to get a better job was to continue his education.
 - D. It seemed to Joseph, wanting a better job, that the best way was to continue his education
29. In this book they saw that we may be unable to deal with the rapid changes taking place in out style of living
- A. In this book they say
 - B. This book tells us
 - C. It says in this book
 - D. They tell us in this book
30. Doctors finally traced the headaches that Emma had had for many years to an allergy
- A. Doctors finally traced the headaches that Emma had had for many years to an allergy.
 - B. Doctors finally traced the headaches to an allergy, Emma having had them for many years.
 - C. Finally Emma's headaches that she had had for many years was traced to an allergy by doctors.
 - D. For many years Emma had had headaches, and doctors finally traced it to an allergy.

31. Ralph read Langston Hughes's "I Too Sing America, "which was extremely interesting one to him."
- A. America,"which was an extremely interesting one to him
 - B. America,"with its being interesting to him as he read it
 - C. America" and it was found extremely interesting
 - D. America" and found it extremely interesting
32. Some people worry about overpopulation because of the food and perhaps too many people to eat it in the future.
- A. because of the food and perhaps too many people to eat it in the future
 - B. because in the future there may be too many people and not enough food to feed them
 - C. because in the future they may have too many people and there will not be enough food to feed them
 - D. because of, in the future, perhaps having too little food for all the people eating it
33. Sam and Roger have been friends ever since he moved next door to him in 1965.
- A. he moved next door to him
 - B. moving next door to him
 - C. Sam moved next door to Roger
 - D. Sam has moved next door to Roger
34. In his spare time, Willie liked to play pool, listen to jazz, or go to the movies.
- A. to play pool, listen to jazz, or go
 - B. to play pool, to listen to jazz, or he went
 - C. playing pool, listening to jazz, or to go
 - D. to play pool, to listen to jazz, or going
35. Miniskirts and other costumes are accepted dress now that businesses would once have banned.
- A. are accepted dress now that businesses would once have banned
 - B. is an accepted way to dress now but businesses would once have banned it
 - C. that businesses would once have banned are accepted dress now
 - D. that businesses would once have banned is an accepted way to dress now

36. The girl standing next to the potted palm in the yellow dress is Luellen Hayes.
- A. The girl standing next to the potted palm in the yellow dress is Luellen Hayes.
 - B. In the yellow dress standing next to the potted palm is the girl. Luellen Hayes.
 - C. Luellen Hayes is the girl standing next to the potted palm in the yellow dress.
 - D. Standing next to the potted palm is Luellen Hayes, the girl in the yellow dress.
37. Some automobiles now use natural gas instead of gasoline for fuel, this change reduces the pollutants in their exhaust by ninety percent.
- A. fuel, this change reduces
 - B. fuel, and it reduced
 - C. fuel, reducing
 - D. fuel, by which it reduces
38. Despite official efforts to stop the heroin trade, great quantities of the drug still enter the U.S. each year.
- A. still enter
 - B. would still enter
 - C. has still entered
 - D. is still entering
39. Ted Martinez was struck by a pitched ball, fortunately, not seriously injured.
- A. ball, fortunately, not seriously injured
 - B. ball, fortunately, not with serious injury
 - C. ball, but, fortunately, there was not serious injury
 - D. ball, but, fortunately, he was not seriously injured
40. Sometimes you can be in 60° temperature in San Francisco and, just a few miles away, they have 95°.
- A. you can be in 60° temperature in San Francisco and, just a few miles away, they have 95°.
 - B. when you have 60° intemperature in San Francisco, it is 95° just a few miles away
 - C. San Francisco can have 60° and, just a few miles away, you have 95°
 - D. the temperature in San Francisco is 60°, and a few miles away it is 95°

STOP

IF YOU FINISH BEFORE TIME IS UP, CHECK YOUR WORK ON THIS PART ONLY. DO NOT GO BACK TO THE FIRST PART.

APPENDIX C
READING PLACEMENT TEST

READING

Directions: Each passage in this test is followed by questions based on its content. After reading a passage, choose the best answer to each question and put an X in the corresponding blank on the answer sheet. Answer all questions following a passage on the basis of what is stated or implied in that passage.

(The passages have been adapted from published material to provide the students with significant problems for analysis and evaluation. The ideas contained in the passages are those of the original author and do not necessarily represent the opinions of the College Entrance Examination Board or Educational Testing Services.)

You will have 25 minutes to work on the 35 questions in the test.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO (OR, IF SELF-ADMINISTERED, UNTIL YOU HAVE BEGUN TO TIME YOURSELF)

READING

Time-25 minutes

35 Questions

The spider is one of Nature's most successful wanderers. Found all over the world, it is able to travel huge distances. When a traveling spider approaches a stream or river, it uses a unique (5) method of locomotion. Rolling over on its back, the spider shoots out glue-tipped glob of web material attached to a line, gradually paying out more and more line as the wind carries the "anchor." If the arrowing line strikes a secure (10) target on the favored side of the water, the spider then climbs a bush and walks over the bridge. Another method of locomotion is even more dramatic. The spider again spins out a sticky line ending in a swollen tip. If the line is kept short (15) and the spider does not attach itself firmly to an anchoring bush or rock, the wind will carry the creature far away to an unknown destination. Such sailing spiders have been scraped off the superstructures of ships several hundred miles away from the nearest land.

1. The passage is mainly concerned with how spiders
 - A. travel
 - B. spin webs
 - C. cross rivers
 - D. reach ships
2. As used in lines 5 and 12, "locomotion" most nearly means
 - A. attacking
 - B. moving
 - C. shooting
 - D. spinning
3. The author feels that it is especially dramatic that the spider
 - A. rolls over on its back
 - B. spins out a sticky line
 - C. anchors to rocks and bushes
 - D. sails through the air
4. From the way "superstructures" is used in line 19, it is probable that the ship parts are to be found
 - A. inside the ship
 - B. at the waterline
 - C. near the propeller
 - D. on the top section

GO ON TO THE NEXT PAGE

Snowplows never came through our neighborhood. It was good they didn't because the snow was a wedge against reality we were glad not to face. I thank God it snowed as much as it did when we (5) were young. I thank God we were freed from everything that was familiar.

Sometimes it seemed to snow for days; as if the elements had contrived to free us by transforming ugliness into beauty. There were other parts of (10) the city that hated to see the snow come, and their snowplows worked almost daily trying to set the calendar back. But we prayed for it in our neighborhood. There were no landscaped gardens for us. There had been no year of fun on the golf (15) course. There was no grass to be covered up, only broken glass and pages of old newspapers dancing in the wind with the leaves from the big cottonwoods that were always shedding something. There were no rose bushes that had to be protected (20) against the subzero temperature, only weeds that were more than strong enough to fend for themselves. There was really not much beauty at all, only a gray, dirty, sad world we lived in for nine months, and we were delighted to see it changed.

5. Which of the following is NOT part of the reality the author describes as "everything that was familiar" (line 6)?
 - A. Broken glass
 - B. Leaves from cottonwood trees
 - C. Landscapped gardens
 - D. Dancing newspaper pages
6. The snow is welcome because it
 - A. forces people to protect their rose bushes
 - B. brings out the snowplows all over the city
 - C. makes an otherwise dreary world beautiful
 - D. helps to set the calendar back
7. As used in line 8, "contrived" most nearly means
 - A. sadly failed
 - B. swiftly prepared
 - C. absolutely refused
 - D. deliberately planned
8. The passage is describing
 - A. a city in pioneer days
 - B. a run-down area of a city
 - C. the suburbs of a city
 - D. a city playground

Adolescence is a unique period of transition, a period from childhood to adulthood. As part of the transition comes a shift in orientation, away from the preceeding generation, toward one's own (5) generation. This transition has been taking place since early childhood; even a young child often responds more to the pressures of his fellows than to the desires of his parents. But adolescence is a period in which parental control is in its (10) waning days, a period in which a few teenagers have already broken away from parental control for good.

9. The author sees adolescence primarily as
 - A. the most important time in life
 - B. a time to train to become a parent
 - C. a time of change
 - D. a time of hopefulness
10. If one shifts "orientation" (line 3), he most likely changes his
 - A. fears
 - B. focus
 - C. dreams
 - D. control
11. In line 10, "waning" most nearly means
 - A. winning
 - B. fading
 - C. useful
 - D. bad
12. The author suggests that which of the following is true of the relationship between parents and children?
 - A. Most parents fail to control their children.
 - B. Children work hard to control their parents.
 - C. The child's natural desire for independence often hurts his parents.
 - D. Children become independent of their parents gradually.

(This passage was written in 1966)

In contrasting the protest techniques of Blacks and Mexicans Americans, it must be remembered that the Black's drive for civil rights is based at least partially on a mass movement with mass (5) organization and highly vocal leadership. Mexican-American

GO ON TO THE NEXT PAGE

leadership, on the other hand, rests on the frailest of rank and file participation. A drive for civil rights that involves all Mexican Americans may yet develop, but even the most (10) optimistic of the leaders of the group believe it to be far in the future.

Unfortunately, sympathy for minorities in the U.S. seems to flourish only when their persecution is well publicized. At present, oppression (15) of the Mexican-American minority is little known to the general public. No doubt, then it is true that the plight of the Mexican-American citizen will not become a burden on the conscience of America unless a large, well organized protest (20) movement develops among these oppressed citizens and brings a touch of drama to their struggle.

13. Which statement best summarizes the passage?
 - A. Mexican Americans leaders have hopes for the future
 - B. Mexican Americans problems have become more serious
 - C. Many Americans understand the Mexican Americans' effort
 - D. The Mexican Americans' struggle for civil rights is not effective but may become so.
14. The word "flourish" in line 13 most nearly means
 - A. be amazed
 - B. show gratitude
 - C. struggle
 - D. blossom
15. Which of the following does the author suggest do a great deal to help the Mexican Americans gain their civil rights?
 - A. More optimistic leaders
 - B. More news stories about their problems
 - C. Joining the Blacks' civil rights drive
 - D. An organization with a loose structure
16. In line 14, "persecution" most nearly means
 - A. dramatic action
 - B. unjust treatment
 - C. desire for equality
 - D. attempt to organize
17. The "plight" is the result of which of the following
 - A. Failure to give Mexican Americans their rights
 - B. Guilty conscience of the American people
 - C. The success of a drive for civil rights
 - D. Plans of those who lead the Mexican Americans

The use of coal and oil by electric power companies creates some very serious environmental problems. One of these problems is nitrogen oxide. When you burn the oxygen out of the air, you are left with nitrogen. Nitrogen, when exposed to air at high temperatures, forms nitrogen oxide. It comes out of the powerplant stack, gets mixed with moisture in the air to make various acids, and these get inhaled.

When coal and oil are burned, they give off impurities that contribute to air pollution. They all have a certain percentage of sulfur. Sulfur oxides come out of the stacks and form acids, which are irritants to the mucous membrane, and thus a public problem. Another pollutant is mercury. Combustion of coal and oil is responsible for about one-third of the mercury that gets into environment annually.

To get clean air, we invest money in a stack chemical process plant to clean the waste gases that result from combustion of coal and oil. Such plants are now being experimented with, but utility companies are reluctant to install expensive stack cleanup systems that they are not sure will work. Solutions will be developed to handle the problem. They will be expensive, and their use might raise the cost of power to the public ten to twenty percent.

18. According to the passage, why may the cost of power go up?
 - A. Stopping pollution will be expensive
 - B. Companies will need to make a large profit
 - C. We will use more power
 - D. The price of coal and oil will rise
19. What does nitrogen need to form nitrogen oxide?
 - A. Moisture
 - B. Air and great heat
 - C. Air free of oxygen
 - D. The great heat caused by acids
20. What does the passage say coal and oil are used for?
 - A. To get rid of waste gases
 - B. To manufacture chemicals
 - C. To purify the air
 - D. To create electric power
21. That which is an irritant to mucous membrane would likely?
 - A. cause watery eyes
 - B. make plants grow
 - C. make nitrogen a poison
 - D. remove paint from buildings

Common experience leads us to connect a number of patterns of behavior with habitual silence. They occur in constellations: first, shyness, timidity, and uncertainty; then pride, (5) stubbornness, and sullenness; and finally, distance, depression, and despair. Thus we have three groups, one connected with fear and anxiety, one with withholding and rage, and the last with sadness or hopelessness.

(10) These patterns can affect cultures or nations as well as individuals, and it is evident that to understand another person's silent behavior, one must have at least some sense of the cultural background within such behavior originates.

(15) Suspiciousness is the most common reason for a cultural pattern of speaking only when absolutely necessary. Such suspiciousness is a culture usually develops when that culture has had a long history of oppression and mistreatment by other (20) cultures. Since open defiance has led to destruction, the alternative for members of the culture is to see nothing, know nothing, and, above all, say nothing. If one is dull and unresponsive, the oppressor is unlikely to bother him for long.

(25) If you would make friends, then, with someone whose culture has been to adopt this pattern of suspiciousness, you must develop an understanding of the cultural position from which his suspiciousness springs and you must again and (30) again demonstrate unswerving trustworthiness and goodwill.

22. In line 3, "constellations" most nearly means
- A. heavens
 - B. clusters
 - C. stars
 - D. men
23. According to the passage, a culture usually adopts the pattern of speaking only when absolutely necessary because it
- A. likes being annoying
 - B. does not know the language others use
 - C. has reason to distrust others
 - D. wants to show others how to behave
24. According to the passage, to make friends with one who is quiet because he is a part of a mistreated culture, you should
- A. constantly tell him he is like everyone else
 - B. never stop studying his behavior
 - C. try to find common experiences
 - D. continually show that you are worthy of his trust

25. In line 24, "oppressor" most nearly means one who
- A. takes away another's rights
 - B. keeps things hidden
 - C. wins friends easily
 - D. fails all the time
26. According to the passage, when open defiance fails, members of a mistreated culture pretend that they
- A. do not know what is happening
 - B. are better than everyone else
 - C. need more time to think
 - D. are very frightened

Hierarchies derive their authority from the assumption that there is unequal access to information. Those at the top have access to more information than those at the bottom, and that is (5) why some are at the top and others are at the bottom. But today those who are at the bottom of the school hierarchy, the students, have access to at least as much information about most subjects as those at the top, teachers and administrators. (10) At present the only way control can be maintained over the students is by carefully discriminating against what they know; that is, by labeling what the students know as unimportant. On the other hand, if cinematography, mass communication, (15) popular music, race relations, or urban life were made major subjects, even an elementary school might then find itself in a situation where the faculty were at the bottom and its students at the top. Certainly, it would be hard to know who were the teachers and who the learners.

27. "Hierarchies" (line 1) most nearly means
- A. subjects taught in school
 - B. relationships between students and teachers
 - C. organization of people, some having more power
 - D. theories of education
28. "Discriminating" suggest making a choice of subject matter that
- A. is careful and thoughtful
 - B. quarantees the teacher an advantage
 - C. helps students get good grades
 - D. is important but difficult

29. Which of the following questions does the passage answer?
- A. Who knows what the best method of teaching is?
 - B. What have we forbidden students to learn?
 - C. Do teachers always know more than their students?
 - D. Why is learning necessary?
30. The source of power in school has been
- A. physical strength
 - B. wealth
 - C. new trends
 - D. information

Black Americans love their country enough to criticize her fundamentally. Many white Americans simply cannot be bothered. Ironically enough, in the middle of the twentieth century, (5) the black man is the new white hope. To live castrated in a great white harem and yet somehow maintain his black manhood and his humanity-this is the essence of the new man created out of the black invention. History may render the verdict (10) that this was the greatest legacy handed to the New World by the West.

Western man wrote his history as if it were the history of the entire human race. I hope that colored men all over the world have watched (15) Western man too long to commit the fatal folly of writing history with a colored pencil. For there is great wisdom in the old Ghana proverb: "No one rules forever on the throne of time."

We black folk have learned many lessons during (20) our sojourn in this place. One of them is the truth of another Ghana proverb: "Only a fool points to his heritage with his lefthand." We are becoming prouder and prouder of our heritage in America and Africa. And we know the profound (25) difference between pride and arrogance. Yes, we black people stand ready, eager, willing, and able to make our contribution to the culture of the world. Our dialogue will not be protest but affirmation of the human dignity of all people everywhere

31. The author most strongly suggests that criticism can be proof of
- A. love
 - B. pride
 - C. eagerness
 - D. arrogance

GO ON TO THE NEXT PAGE

32. Which of the following best explains what the author means when he speaks of "writing history with a colored pencil".
- A. Writing history that makes the deeds of men seem overly important
 - B. Writing history that leaves out the suffering of blacks.
 - C. Writing history that emphasizes the deeds of only one group of people.
 - D. Writing history that includes the entire human race.
33. In line 20, "sojourn" most nearly means
- A. angry speech
 - B. large meal
 - C. secret voyage
 - D. temporary stay
34. According to the author, the black man's contribution to the culture of the work will be to
- A. uphold the worth of men of all races and nations
 - B. muffle the voices who criticize their homeland
 - C. protest against the influence of the past
 - D. teach others the true meaning of oppression
35. The author quotes the proverb "Only a fool points to his heritage with his left hand" (lines 21-22) in order to emphasize that the heritage of black people
- A. has been neglected by Western man
 - B. is something they should be proud of
 - C. is often overemphasized by historians
 - D. has misled men in the fight for equality

STOP

IF YOU FINISH BEFORE TIME IS UP,
YOU MAY GO BACK AND CHECK YOUR WORK

APPENDIX D
STUDENT SURVEY

PASCO HERNANDO COMMUNITY COLLEGE
Equal Access-Equal Opportunity Institution

Dear Student,

You have been specially selected to participate in a college wide study. This study is a combined sponsorship of the faculty, administration, and Student Services Department of Pasco Hernando Community College.

The study is concerned with investigating reasons why students remain in college or choose to leave. By giving a few minutes of your time (approximately 15 minutes) you will help educators to better understand students' reasons for persisting in college. In addition, your contribution will assist educational planners develop more effective ways to prevent student dropouts. Your concern about this matter is shared by all of us at Pasco Hernando Community College.

Your cooperation and efforts will be greatly appreciated by all of us associated with PHCC. You can take pride in knowing you helped your fellow students, both present and future, better accomplish their goal of a college education.

Sincerely,

Michael G. Rom
Research Director

From the East Campus (904) 567-6701
2401 State Highway 41 North, Dade City, Florida 33525

STUDENT SURVEY

STUDENT SURVEY

Directions: Please read all directions and questions completely before giving your honest answer. All questions MUST be answered completely in order for this questionnaire to be valid.

SECTION ONE: Background Information

This information concerns characteristics and/or behaviors that might be unique to you prior to attending PHCC.

Directions: Please fill in the blanks or check JUST one of the options that MOST CLOSELY FITS your situation.

1. Social Security Number: _ _ _ - _ _ - _ _ _
2. Age: _____ years
3. Sex: male ___ or female ___
4. Racial/Ethnic Identification: white ___ or non-white ___
5. What was your grade point average in high school?
 ___ A/A+ ___ A- ___ B+ ___ B- ___ C+ ___ C- ___ D or below
6. What was your class percentile rank in high school? (please check the closest to yours)
 Top __ 10% __ 20% __ 30% __ 40% __ 50% __ 60% __ 70% or below
7. What is the highest level of formal education obtained by your parents?

Father	Mother	
_____	_____	Grammar school or less (1-8 years)
_____	_____	Some high school (9-11 years)
_____	_____	High school graduate (12 years)
_____	_____	Some college
_____	_____	College graduate (Bachelor's Degree)
_____	_____	Some graduate study
_____	_____	Received graduate degree (Masters or Doctorate)

PLEASE CONTINUE TO THE NEXT PAGE

8. Have you taken and completed a human relations type course (Human Development, Individual Discovery, etc.) at the college level?

yes___ or no___

SECTION TWO: Commitment

This information concerns to what degree an individual may be committed to a certain goal and/or a particular educational institution.

Directions: Please continue to check JUST one of the options that MOST CLOSELY FITS your situation

9. What is the highest academic degree you expect to obtain anywhere?

___ Associate of Arts/Science (A.A. or A.S.)
 ___ Bachelor's Degree (B.A. or B.S.)
 ___ Masters Degree (M.A., M.S., etc.)
 ___ Doctorate Degree (Ph.D. or Ed. D.)
 ___ Medical doctorate (M.D., D.D.S., D.V.M., etc.)
 ___ Bachelor's or doctorate in Law (LL.B. or J.D.)

10. In applying to college, was Pasco Hernando Community College (PHCC) your:

___ 1st choice ___ 2nd choice ___ 3rd choice ___ 4th choice

11. How important is it to you to graduate from college?

___ extremely
 ___ very important
 ___ somewhat important
 ___ not at all important

12. How confident are you that you made the right decision in choosing to attend PHCC?

___ extremely confident
 ___ very confident
 ___ somewhat confident
 ___ not at all confident

PLEASE CONTINUE TO THE NEXT PAGE

13. To what degree do you agree with this statement. "I will probably transfer from PHCC before graduation."

☐ strongly agree
☐ agree
☐ not sure
☐ disagree
☐ strongly disagree

SECTION THREE: Academic Integration

This information concerns whether individuals meet certain explicit standards of the academic system (grade performance) and identify with the norms of the academic system.

Directions: Please record the accurate number in the space provided.

14. Students have a variety of contact with faculty members. In the blank to the right, please estimate the number of times this semester you have met with a faculty member outside the classroom for each of the following reasons. Record only the number of those conversations that lasted 10 minutes or more.

1. To get basic information and advice about my academic program....._____
2. To discuss matters related to my future career....._____
3. To discuss intellectual or course related matters.._____

Directions: Following is a list of statements characterizing various aspects of academic and social life at Pasco Hernando Community College (PHCC) and with which you may or may not agree. Using the scale to the right of each statement, please indicate, the extent of your agreement or disagreement with each statement, as it applies to your PHCC experience, by circling the appropriate abbreviation. PLEASE circle ONLY ONE abbreviation for each statement.

PLEASE CONTINUE TO THE NEXT PAGE

- PLEASE CONTINUE TO THE NEXT PAGE

23. My non-classroom interactions with PHCC faculty members have had a positive influence on my career goals and aspirations.....SA A NS D SD
24. Only a few of the PHCC faculty members I have had contact with are genuinely outstanding or superior teachers.....SA A NS D SD
25. Only a few of the PHCC faculty members I have had contact with are genuinely interested in students.....SA A NS D SD
26. Most PHCC faculty members I have had contact with are genuinely interested in teaching.....SA A NS D SD

SECTION FOUR: Social Integration

This information is concerned with the combined effects of peer-group interaction and faculty interaction on the students' integration into the social setting of an institution.

Directions: Please follow the same directions outlined in Section Three.

27. My interpersonal relationships with other students at PHCC have had a positive influence on my intellectual growth and interest in ideas.....SA A NS D SD
28. Since coming to PHCC I have developed close personal relationships with other students.....SA A NS D SD
29. The student friendships I have developed at PHCC have been personally satisfying....SA A NS D SA
30. My interpersonal relationships with other students at PHCC have had a positive influence on my personal growth, values, and attitudes.....SA A NS D SA

PLEASE CONTINUE TO THE NEXT PAGE

31. It is difficult for me to meet and make friends with other students.....SA A NS D SD
32. Few of the PHCC students I know would be willing to listen to me and help me if I had a personal problem.....SA A NS D SD
33. Most students at PHCC have values and attitudes which are different from my own.....SA A NS D SD
34. I am satisfied with the opportunities at PHCC to meet and interact informally with faculty members.....SA A NS D SD
35. Few of the PHCC faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.....SA A NS D SD
36. Since coming to PHCC I have developed a close, personal relationship with at least one faculty member.....SA A NS D SD
37. My non-classroom interactions with PHCC faculty have had a positive influence on my personal growth, values, and attitudes...SA A NS D SD
38. Most of the PHCC faculty members I have had contact with are interested in helping students grow in more than just academic areas.....SA A NS D SD

Directions: Please record the accurate number in the space provided.

39. Students have a variety of contact with faculty members. In the blank to the right, please estimate the number of times this semester you have met with a faculty member outside the classroom for each of the following reasons. Record only the number of those conversations that lasted 10 minutes or more.

1. To help resolve a disturbing personal problem.....___
2. To discuss a campus issue or problem.....___
3. To socialize informally.....___

PLEASE CONTINUE TO THE NEXT PAGE

40. During this term, in how many extracurricular activities did you spend, on the average, more than 2 hours per week? (include clubs, organizations, organized athletics, etc.)._____

SECTION FIVE: DROPOUT DECISION

This information indicates the perceived intent of the individual's educational plan

Directions: Please check ONLY ONE of the available options.

41. What are your immediate future educational plans?

1. I plan on returning to PHCC next term.....___
2. I plan on returning to PHCC but not necessarily next term.....___
3. I plan on attending another institution next term.....___
4. I plan on attending another institution, rather than PHCC, but not necessarily next term.....___
5. I am not planning to return to this or any other institution anytime in the foreseeable future.....___

Directions: Please take a few minutes to make sure you have answered ALL questions

Thank you very much for you time and cooperation

APPENDIX E
MONITOR INSTRUCTIONS

Dear Monitor,

First I would like to thank you very much for your time and cooperation in this matter. Without this effort my task would be very difficult.

Please had out the questionnaires to the students whose names appear on the front during the week of November 26, 1984. Read the following instructions:

"Please read the cover letter of the survey. Carefully read all instructions and be sure to complete all items. Make sure your social security number is correct and filled in on the questionnaire. This questionnaire and your response is no way connected with this particular course. Your assistance is appreciated in helping us keep students in school."

Allow approximately 15 minutes for completion. There is no time limit but it should take only 5 to 10 minutes to complete.

Collect all forms as completed and check to make sure the Social Security number is listed. All surveys completed and non-completed should be returned to Michael G. Rom by 12/3/84 if possible. If a student can not be contacted until later please hold until 12/7/84 at the latest.

Thank you VERY MUCH and if there are any questions please contact me on the East Campus ext. # 24.

Sincerely,

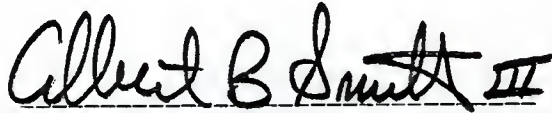
Michael G. Rom

BIOGRAPHICAL SKETCH

Michael G. Rom was born in Pittsburgh, Pennsylvania. He attended elementary and secondary schools in Orlando, after moving to Florida in 1953. He graduated from Edgewater High School in Orlando, Florida in 1965. In 1969 he received his Bachelor's of Arts degree in Psychology from the University of South Florida. He worked in Dade City, Florida teaching special education while receiving his Masters of Education degree in 1972. During his employment with Pasco County as Dean of Students and Assistant Principal, he continued his education resulting in administration certification.

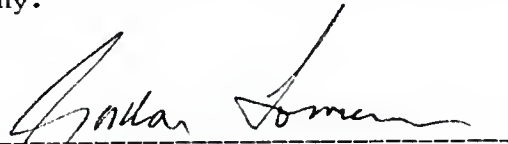
When he started his full-time employment at Pasco Hernando Community College, in 1978, he also began work on his doctorate at the University of Florida. During this time he was employed full-time by Pasco Hernando Community College, with additional part-time employment by St. Leo College and First United Methodist Church. He plans on continuing his full-time career at Pasco Hernando Community College as a classroom instructor.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A handwritten signature in black ink, reading "Albert B. Smith III". The signature is written in a cursive style with a horizontal line underneath.

Albert B. Smith III, Chairman
Professor,
Educational Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A handwritten signature in black ink, reading "Gordon Lawrence". The signature is written in a cursive style with a horizontal line underneath.

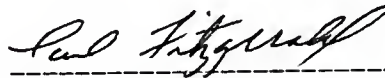
Gordon Lawrence
Professor,
Educational Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A handwritten signature in black ink, reading "Steve Olejnik". The signature is written in a cursive style with a horizontal line underneath.

Steve Olejnik
Associate Professor,
Foundations of Education

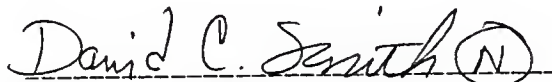
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Paul Fitzgerald
Professor,
Counselor Education

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillments of the requirements for the degree of Doctor of Philosophy.

August 1985



Dean, College of Education

Dean, Graduate School

